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Verulamium, 1930-40

by PHILIP CORDER

ALTHOUGH by the seventeenth century Verulamium had become 'a forgotten Citie sometimes neere Saint Albones', its site has never been lost. In spite of deliberate destruction in the eleventh century—first by Saxon Abbots, who filled its 'subterranean crypts' because they had become lurking places for thieves, and later by the Normans, who quarried tens of thousands of bricks from its walls to build their new abbey on the adjoining hill—many of its buildings must have been visible as recently as two hundred years ago. Much of the West Gate was still to be seen in 1700,¹ and twenty years later Stukeley records how he encountered 'hundreds of cartloads of Roman bricks' being carried to the repair of the high road.² The work of spoliation continued during the first half of the nineteenth century, until the site of the third largest city of Roman Britain merged into the surrounding fields; nothing but the ragged remains of its overgrown walls survived here and there to indicate its site.

Some sporadic attempts at excavation were subsequently made, notably the uncovering of the Theatre by R. Grove Lowe in 1847,³ and small-scale excavations on the site of the Forum by William Page and the Reverend R. C. Bicknell between 1899 and 1902;⁴ but in 1914 a writer in the *Victoria County History* could truthfully say, 'the site

¹ *Journ. British Arch. Assoc.*, xxvi, 48 and plan.

² Stukeley, *Itinerarium Curiosum*, I, 116.

³ R. Grove Lowe, *A description of the Roman Theatre of Verulam* (1848).

⁴ *Trans. St. Albans & Herts A. & A. Soc.* (1899-1902).

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of Verulamium has not been systematically explored and so the history of the town has yet to be written '.

A new era opened, however, ten years ago, when the Corporation of St. Albans purchased 104 acres—about half the ancient City—from the Earl of Verulam and proposed to lay it out as a recreation ground. Rightly regarding themselves as custodians of the site, they initiated proposals which resulted in the formation of the Verulamium Excavation Committee. Excavations on a scale befitting a great national monument were begun in 1930, under the direction of Dr R. E. M. Wheeler and the late Mrs T. V. Wheeler, and were continued until 1934. Here for the first time the opportunity presented itself to recover the history of a major Romano-British town, unhampered by later buildings.⁵ Moreover, as we learn from Tacitus, already by A.D. 61 Verulamium had been accorded the status of *municipium*,⁶ a rank enjoyed by no other British City, and only conferred on native communities that had already achieved a degree of size, wealth and culture sufficient to warrant this grant of citizenship to their inhabitants.

The aim of the excavators was therefore clear. First, to recover as much of the plan of the southern half of the City as possible, before the area was laid out as a recreation ground, and in doing so to establish the history of the Roman City whose theatre and dilapidated defences were already known. Second, to recover both site and history of its Belgic predecessor, which coin-evidence and established tradition had fixed upon the site of Verulamium.⁷

The first aim was realized so satisfactorily in three long seasons of excavation that no urgent problem is left outstanding in connexion

⁵ Silchester, a tribal capital of half the size, was excavated in 1890-1909; Caerwent, little more than one-fifth the size, in 1899-1913; while Corbridge, the base for Hadrian's Wall, and thus hardly a typical Roman town, was in course of excavation when the Great War broke out in 1914. The earlier of these excavations produced little more than a ground-plan; but the strides made since 1914 in archaeological technique, particularly in the study of Roman pottery, provided the modern excavator with tools that had not been forged twenty years earlier. The two larger cities of London and Cirencester are largely built over, and only Wroxeter among the remaining towns of Roman Britain could compare with Verulamium in size and opportunity.

⁶ Tacitus, *Annals*, xiv, 23.

⁷ While it is not the purpose of this paper to relate the ascertained history of Verulamium—for a full report on the excavations of 1930-4 forms Report XI of the Research Committee of the Society of Antiquaries—but rather to chronicle the ten years work that led to its partial recovery, a brief chronological outline has been appended to this paper for the convenience of readers, together with a list of all papers dealing with Verulamium published since 1930.

with what proved to be the second Roman City. Three of the gates of this City were examined, planned, and securely dated along with their accompanying defences, to the Hadrian-Antonine period (c. A.D. 130-150), as close a limit as the nature of the evidence permits in our present state of knowledge. The second objective led the excavators further afield. It was soon apparent that there was not, as earlier antiquaries had supposed, any pre-Roman occupation of the southern half of the site. A thorough examination of the Fosse earthwork, which follows in part the line of the northern defences but which includes within it some 35 acres to the west of them, proved this to belong with certainty to the third quarter of the first century, and hence to represent the framework of the first Roman City, the internal planning of which remains entirely unknown to the present day. Attention was next directed to earthworks in Prae Wood, on the plateau westward of the City, and here was discovered an abundant, if ill-defined, Belgic occupation. The study of the great mass of pottery recovered, while enabling the excavators to assign this occupation to the first century before the Roman Conquest, that is, to the age of Tasciovanus and his successor, ruled out entirely the traditional view that Verulamium was the stronghold of Cassivellaunus, stormed by Julius Caesar in 54 B.C. The investigation of Beech Bottom Dyke, a cross-country dyke on the opposite side of the valley, led them next to a great earthwork at Wheathampstead some five miles distant, where trial trenches demonstrated an earlier occupation of an *oppidum* that may tentatively be accepted as the stronghold of Cassivellaunus.

In 1934, thanks largely to the public-spirited action of the Earl of Verulam, whose estate defrayed the considerable expense of the excavation, the Roman theatre, first unearthed ninety years earlier, was scientifically examined under the direction of Miss K. M. Kenyon, and subsequently preserved. This is the most imposing of the monuments of Verulamium, and it is, moreover, the only Roman theatre that is ever likely to be seen in Britain. Two others only are at present known to have existed, the theatre at Colchester, mentioned by Tacitus, but as yet undiscovered, and one whose former existence is attested by an inscription only at the tiny capital of the Parisi at Brough on the banks of the Humber.

During the excavation of the theatre, Mr A. W. G. Lowther was examining the *insula* to the west of it, which contained a Romano-Celtic temple within a large rectangular enclosure, one of the earliest stone buildings yet known in the City. Much valuable light was

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thrown on the history of Verulamium by these two excavations near its centre. In the 11 acres examined in the southern part of the City no building was found that had been erected at a later date than the opening years of the fourth century, when the 'Constantian Renaissance' had led, as it did elsewhere in Britain, to extensive rebuilding. Throughout the fourth century, occupation there had clearly been slight and dwindling, whereas here, near the central block of administrative buildings, evidence of late occupation was abundant. The Temple had been elaborately reconstructed as late as c. A.D. 380, while at the same time the theatre, though no longer put to its proper use, had become a convenient rubbish-dump, the successive layers of refuse that hid stage and orchestra containing over 2,000 coins, many of the late fourth century. It may also be added that no evidence of pre-Roman occupation underlay these two great buildings.

In 1934 a halt was called to work on an extended scale, not because it was felt that the City had yielded up all its secrets, but rather to await the outcome of a proposal for cutting a 100-foot arterial road across the site that might necessitate at any moment the expenditure of a very large sum on a hurried emergency dig. It was not until 1937 that the devastating course of this proposed road was happily deflected elsewhere, and in the following year excavation of the *insula* east of the theatre was undertaken. But in the years of uncertainty after 1934 much work on a smaller scale was carried out. In 1935 the old farm of St. Germain was pulled down with a view to erecting a new museum. It lay at the east corner of the Forum at a point where Watling Street crossed the main east and west road through the City. Here the east corner of the Forum complex was exposed, the only part of it that was not buried beneath the churchyard of St. Michael's and the adjoining vicarage garden. Part of the next *insula* was also explored. In the same year an extensive cremation cemetery by the side of Watling Street on the brow of St. Stephen's Hill was investigated by Dr Norman Davey and Mr V. F. Rees. Three burning-chambers and more than one hundred burial-groups were discovered and published. In the following year a small site in the southern part of the City, east of the major excavations of 1930-3, was excavated by Mr Lowther, before the erection of a tea pavilion upon it. Meanwhile trees and bushes were being planted in connexion with the lay-out of the park, and every hole made for these was supervised for the Excavation Committee. In 1934, in the course of this work, Mr Lowther had discovered a small basilical building, bearing some resemblance to a Christian church, in the southern area

of the City, in a region where there was a significant absence of occupation. The line of a drain from the new tea pavilion towards the lake cut across a road and 2nd-century building adjoining it. These were noted by Mr F. Cottrill, but were first fully revealed by the air-photographs of 1940 (PLATE 1).

When the site of the new museum was finally chosen, it lay to the east of the area examined by Mr Lowther. As the foundations were dug, Mr J. B. Ward Perkins was able to note as much as the nature of such excavations permitted. The laying of a new road-surface west of the Museum in 1939 provided an opportunity of pushing a few yards further the excavation of the east corner of the Forum. An interesting suggestion has been raised by these last two excavations. The course of the north and west sides of the Fosse has been exactly determined by excavations ; its east side is presumed, with good reason, to coincide with the later stone defences of the 2nd-century City ; but its south side, which must perforce have been levelled and obliterated when the City was extended southwards in the Hadrian-Antonine period, eluded exact location in spite of extensive trial trenching in 1933. Mr Lowther had found the metalling of the earliest Watling Street underlying the east corner of the Forum, but it was now found that its walls some fifteen feet further west had been carried down ten feet or more into made-up ground containing early sherds, like the filling of a ditch. Mr Ward Perkins observed a similar band of deep disturbance in line with this across the middle of the site now occupied by the Verulamium Museum. It seems probable that this is the Fosse ditch, interrupted, as one would expect at this point, by the passage of the pre-existent Watling Street.

When the threat of the arterial road had been removed and archaeological considerations rather than expediency could again predominate in the choice of a site, the examination of the *insula* east of the theatre was undertaken by Miss K. M. Richardson in 1938.⁸ The ostentatious façade of this building had been exposed and planned in 1847 by Mr Grove Lowe, and again during the search for the Triumphal Arch in 1934. Both its monumental character and its situation gave promise of an important public building, and it was hoped that something might be learnt about the nature of the first Roman City, from which no pottery

⁸ A full report on this excavation is to appear in *Archaeologia*. A short summary, with plans, is printed in *Trans. St. Albans & Herts A. & A. Soc.*, 1938, and *Journ. Roman Studies*, 1939, XXIX, 211-13. I am indebted to Miss Richardson for permission to read and make use of her unpublished report.

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group had yet been recovered. In particular it was hoped to determine finally whether any Belgic occupation had existed hereabouts before the construction of Watling Street, which forms the western boundary of the *insula*.

The site proved as complicated as, perhaps, only a Roman site continuously occupied for four centuries can be, and this is no place to attempt a summary of what was found. Let it be said at once that no evidence whatever came to light to suggest a Belgic occupation before the Conquest. Including the areas already excavated in this part of the valley in the central area of the first Roman City, some $3\frac{1}{2}$ acres are now known to be devoid of pre-Claudian occupation, from which fact we may now, I think, conclude that the city of Tasciovanus was, in fact, confined to the plateau of Prae Wood. Abundant traces were encountered of a considerable wooden building, having a frontage on Watling Street of at least 100 feet, but these were too scattered and fragmentary to be planned. This building came to a violent end by fire in the third quarter of the first century, and a thick layer of burnt daub and ash over the whole site has produced a valuable series of pottery of the period ending with the Boudiccan revolt of A.D. 61, in which the building probably perished. The site was later occupied by stone buildings of three successive periods, the interpretation of which provided a number of problems. The first was in all probability a public market hall, but this was later much reduced in size and in the central courtyard were erected, in the late third or early fourth century, two massive blocks of flint rubble, 8 feet deep and 10 feet apart, which must have been designed to carry a very heavy weight. As so often happens at Verulamium, the destruction of the latest strata had removed all evidence of the final fate of the building.

It was intended that this excavation should be the first of a series on a more restricted scale, spread over a number of years, and designed to elucidate the problems left unsolved by the large-scale operations of 1930-4, but the outbreak of war has led to the indefinite postponement of the scheme.

Preservation has, wherever feasible, accompanied excavation. In 1931 the stretch of the 2nd-century defences from the southeast gate up to and including the south angle had been placed in the custody of H.M. Office of Works for preservation as a national monument. Although not to be compared, perhaps, with the walls of Silchester and Caerwent, they form one of the most imposing relics of Roman city-defences. By the removal of thousands of tons of accumulated soil

from the double ditch at the south corner, and the preservation of the projecting semicircular bastion at the angle, a complete cross-section is now exposed of the City's defences such as is not to be seen on any other British site. Of the monumental London gate, with its double carriage-way and imposing flanking drum-towers, no superstructure remained, but its exact plan has been marked out in flints upon the turf as a permanent record.

The Roman theatre has also been preserved at the expense of the Earl of Verulam, and the carved Corinthian capital from the stage now crowns a new column, the proportions of which were obtained from a complete drum recovered during the excavations (PLATE III).

Of the buildings uncovered in the southern part of the City few were sufficiently well-preserved to merit the very costly undertaking involved in preservation, even if this had been desirable or their situation had made it feasible. Three of the five practically complete mosaic pavements were lifted and are now set up in the Verulamium Museum. The largest—that flooring the *tepidarium* of a private suite of baths in Insula IV (c. A.D. 160-190)—has been preserved *in situ* in a suitable building. Near it is part of a second floor belonging to the reconstruction of the house, c. A.D. 300. Among the many achievements of the excavators of 1930-3 was the dating of the series of fine mosaics—a matter badly neglected by earlier antiquaries. Nowhere else in Britain can two pavements separated in date by more than a century be studied together *in situ*, the larger, upwards of 21 feet by 15 feet in size, still roofing a complete hypocaust system.

As recently as the late autumn of 1940, the east corner of the Forum complex has been outlined in flints on the grass plot adjoining the Museum, to indicate to the visitor the site of the civic centre of the City, much of which is beyond the reach of future excavation.

With the opening of the Verulamium Museum in 1939, the City Council of St. Albans once again earned the gratitude, not only of the 50,000 persons who have visited the collection in the first two years of its life, but of all who care for the proper preservation of our national antiquities. Here in a convenient building designed for its purpose, and situated in the very centre of the Roman City, are exhibited the many finds made during the ten years of excavation.

As has already been said, plans had been begun for continuing excavation in 1940, when war broke out, but though these must now be postponed until happier times, the weather has stepped in to ensure that no year, even in war-time, shall be allowed to pass without adding

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its dole to our accumulating knowledge. The southern part of the City is now occupied by football and cricket pitches and tennis courts. Between the shed that covers the largest mosaic pavement and the newly constructed lake, the grass is kept constantly cut during the summer. Beneath it lie not only those roads and buildings already explored, but many others not yet discovered. During every dry period in summer some of the streets of the Roman City appear as brown streaks, the grass upon them, more shallowly rooted, scorching before its surroundings. In the prolonged drought of August 1940 not only was the chess-board street-plan of this part of the City clearly to be seen, but several buried buildings were so clearly indicated that surface measurement became practicable. At this juncture Mr O. G. S. Crawford* was able to arrange with the Air Ministry to undertake an aerial survey, which was carried out on the morning of 12 September from a height of 3000 feet (PLATE II). The results, combined with such measurements as were feasible from the ground, have been added to the plans of the excavations already described, and are shown on the plan facing page 113.⁹

Some comment on the new features that here appear for the first time may now be added. Watling Street is visible from the air-photographs in several places as it slopes down from St. Stephen's to the southeast gate, and from here it is clearly marked as far as the main road-junction facing the triangular temple. It continues some way to the east of this, passing on the left the shop with the cellar explored in 1930. No trace whatever could be seen of it after the next road-junction, and it seems probable that it became disused from this point when the 2nd-century City was laid out, and was removed to make way for buildings as the air-photograph seems to show. If so, the traffic would be carried on the road next to be described to the south entrance of the Forum, and hence round the east side of that building. It was noted that the main east-west road through the City widens to 35 feet or more to the east of the Forum entrance, perhaps to provide a sort of municipal car-park at this central spot. At the present day such a car-park once again occupies an area a few yards further east.

Perhaps the most important fact shown by the new air-survey is the road just mentioned. It leads south from the south entrance of

* Acting on a suggestion made by Mr Corder himself, in a letter to me.—O.G.S.C.

⁹ The additions made to the map of Verulamium since the publication of the definitive report on the excavations of 1930-4 may be observed by comparing the map here published with plate CXIX of that report.

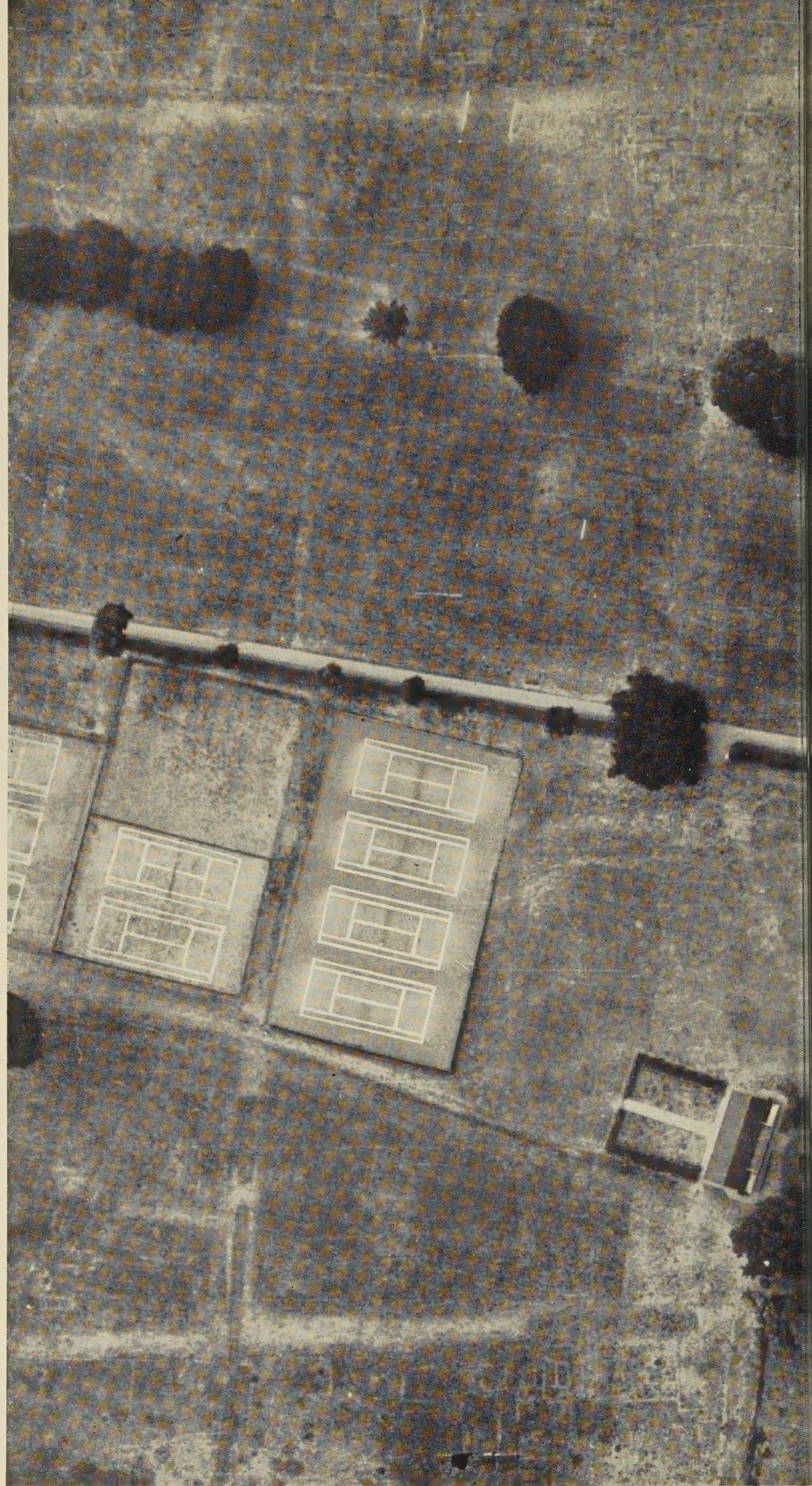
PLATE I



ROADS AND BUILDINGS BETWEEN TEA PAVILION (RIGHT HAND TOP) AND LAKE (LEFT HAND BOTTOM)
IN THE SOUTHERN PART OF VERULAMUM

The City Wall is seen as a straight white line along margin of lake, and buildings as crop-sites alongside streets

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GENERAL VIEW OF PART OF VERULAMIUM TO THE SOUTHEAST OF THE FO

The Verulamium Museum

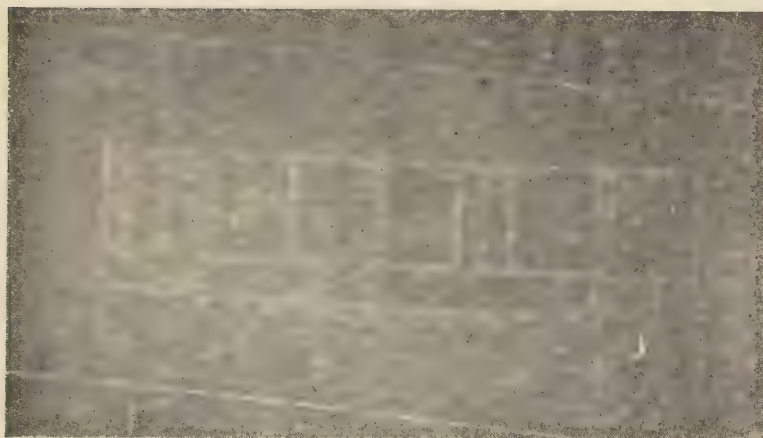
Ph. R.A.F.



OUTSIDE RIGHT HAND MARGIN OF PHOTOGRAPH), SHOWING STREETS (WHITE)
the right hand bottom corner
copyright reserved



THE THEATRE, VERULAMIUM
Ph. R.A.F. Crown Copyright reserved



PLAN OF ROMAN CORRIDOR HOUSE REVEALED AS CROP-SITE SOUTHWEST
OF THE ROMAN THEATRE OF VERULAMIUM
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the Forum and can be traced all the way to the ramparts, except where hidden by modern tennis courts.¹⁰ Parallel to this runs another road forming the southern continuation of the line taken by Watling Street through the northern half of the City. This road was exposed by Mr Lowther in 1935 at the eastern boundary of Insulae XII and XIII, and was noted again by Mr Cottrill during the laying of the drain from the tea pavilion mentioned above. It was now visible as a brown band, about 20 feet wide, across the high ground west of the lake, until it ended abruptly on the edge of the slope, where it was, in all probability, buried beneath upcast from the recently-constructed lake (PLATE I).

The most interesting of the new buildings to be seen during the drought lay just south of the Forum, where on the east of the new road from the Forum Entrance, adjoining the 'car-park', appeared the walls of a double rectangle burnt out on the turf in lines 18 inches wide. Though part of this building is obscured by the modern pathway and hedge, it suggested at once the plan of a small Romano-Celtic temple, about 53 feet square. Two such temples lie in a similar relationship to the Forum at Caistor-by-Norwich. On the opposite side of the same road part of the plan of another building was also observed. This consisted of a rectangular structure, 25 feet wide, ending in a room about 15 feet across, and flanked by a corridor some 8 feet wide facing the road, but the plan was obviously incomplete (PLATE II, right centre).

A considerable house appeared to the east of the road between the tea pavilion and the lake. It appears to have a corridor facing the road, with a number of rooms opening from it. This house was located during the laying of the drain mentioned above, and Mr Cottrill was able to assign its construction to the second century. Many fragmentary buildings were also indicated by the air-photographs in this area (PLATE I).

The course of the City Wall is well known, but its exact line was clearly visible along the western margin of the lake in several places. At one point south of the modern bandstand, which is placed on a mass of upcast from the lake, obscuring all Roman structures, is a long narrow rectangular building that is shown on the air-photograph to have flanking corridors. All these new structures appeared in that part of the City where the grass is short, and where in consequence the drought proved most effective, but even in rough grass or stubble two other buildings have been added to the plan as the result of the air survey.

¹⁰ This road is clearly visible across the middle of PLATE II.

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One is a small corridor house in the northern half of the City, lying to the west of the main north-south road, which could be seen right across the site (PLATE III). It is remarkable that this building should have been shown up on cultivated land on which there was no crop at the time, and in an area where nothing else is to be seen. It suggests a building sufficiently well preserved to repay excavation for its own sake. Situated as it is near the central area where late 4th-century occupation seems proved, its excavation might produce evidence of a kind lacking in the southern part of the City. The second, less clearly visible, lies under coarse grass in an area not yet excavated to the northwest of the hypocaust.

It may be years before conditions are again so favourable for air-photography. But all that the best air-photograph can do is to reveal the streets and buried buildings where these are sufficiently upstanding to cause parching of the turf above them. What it can never do is to give us the history of these buildings, or throw light on their relationship to one another, or elucidate, as only the study of stratified finds can do, the economic life of the community they served. Scientific excavation alone can do this. Though at the moment the prospect of renewed excavation may seem distant, it is well that we should bear in mind what still remains to be done, before our knowledge of Verulamium is in any degree complete. It has already been said that future digging in the southern part of the City is unlikely to throw much fresh light on its history, though it would obviously add to its plan. But the same cannot be said of the first Roman City, about which little is known. Wherever digging here has been undertaken it has been on a part of the site where important later stone structures have obscured the earlier wooden buildings, and where early floors have been disturbed or removed by later foundations. In the triangular area of the early city that lies outside the 2nd-century defences, the conditions are presumably different, and here excavation should give us what we seek. So far excavations have thrown little light on the last days of Verulamium, though all the indications have pointed to a shrinking and poverty-stricken occupation during the fourth century, and the abandonment of areas formerly inhabited. It may be that systematic robbing of the buildings, followed by centuries of ploughing, has removed the latest levels, but persistent search in the centre of the City—as for instance between the Theatre and the Forum, might yet be rewarded.

VERULAMIUM, 1930-40

APPENDIX

CHIEF EVENTS IN THE HISTORY OF VERULAMIUM

- 54 B.C. Julius Caesar sacked the stronghold of the Belgic chieftain Cassivellaunus, probably the fortified *oppidum* at Wheathampstead.

PRE-ROMAN VERULAMIUM (Prae Wood)

Late 1st cent. B.C. The Belgic City in Prae Wood takes the place of the Wheathampstead *oppidum*.

c. 15 B.C.-c. A.D. 10. Tasciovanus, king of the Catuvellauni, had his mint at Verulamium.

c. 10-c. 40 Cunobelin, son of Tasciovanus, transferred the Belgic capital to Colchester.

c. 43 Defences strengthened before the Roman Invasion of Claudius. Submission of Verulamium.

THE FIRST ROMAN CITY OF VERULAMIUM

c. 45 Construction of Watling Street. A new City established on the slopes of the valley is granted the status of *municipium*. Buildings of wattle and daub.

61 Boudicca, Queen of the Iceni, destroyed the City, shortly after which the Fosse earthwork was constructed.

THE SECOND ROMAN CITY OF VERULAMIUM

c. 130-150 Period of intensive development. A new City planned to include 200 acres along Watling Street, defended by stone walls and gates. Large and well-built public buildings and private houses and shops. Mosaic pavements.

3rd cent. Period of decay. Many buildings dilapidated and ruined.

c. 300 'Constantian Renaissance'. Much rebuilding within the City, followed after a short period by decline in wealth and population.

c. 303 Martyrdom of St. Alban.

c. 380 Theatre derelict: clumsy remodelling of Temple west of theatre.

410 Withdrawal of Roman control from Britain.

POST-ROMAN VERULAMIUM

428 St. Germanus, bishop of Auxerre, visited Verulamium to combat Pelagian heresy, and repel an army of Picts and Scots. Roman traditions still alive.

793 Offa II, king of Mercia, established the Benedictine monastery on the site of an earlier church.

1077-1097 Abbot Paul de Caen rebuilt the abbey with Roman materials from Verulamium.

11th-19th cent. Intermittent spoliation of Verulamium.

1847 Discovery of the Roman theatre.

1930-1940 Systematic excavation of Verulamium.

1939 Opening of the Verulamium Museum.

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The Viking Taste in Pre-Conquest England

by T. D. KENDRICK

VIKING art did not to any appreciable extent intrude into, or influence, English art at the time of the early raids (*c.* 800), or during the Settlement Period and the time of the Alfredian wars (866–900). In fact it does not come into the story until the tenth century, and it is easy enough to see why this is so. In the victorious West Saxon districts of England from which the Danes had been expelled, the Christian and quasi-Carolingian ‘Winchester’ art had been established, and for the leading men of free England Viking art was a hostile thing representing heathendom and the abominable enemies of English civilization; while inside the Danelaw the Viking settlers themselves struggled, presumably with no grander equipment than modest wood-carvings and minor metal and bone ornaments, against a magnificent and firmly established Hiberno-Saxon art that, expressed in an imposing series of sculptured crosses and illuminated books, splendidly surpassed Viking art in its own barbaric idiom. Only slowly, then, and with very timid beginnings, could a Scandinavian style gain ground, and this it did, not at the point of the sword in a period of Viking ascendancy, but in those years succeeding the Viking settlement when the English had regained the upper hand. It is, indeed, after the final reconquest of the Danelaw under Eadred (*d.* 955), after the last of the foreign kings of York had been driven out, and in a period of peace that is roughly defined by the reign of king Edgar (959–975), that some sort of amalgamation between the Hiberno-Saxon and the Viking tastes is first discernible in the districts settled by the invaders.

The first point to make is that real unmistakable and easily recognizable Danish art is only very seldom to be found in Northumbrian sculpture. Just a few pieces, however, do reflect the Jellinge style. This is represented in its home country by the sumptuously decorated horse-collars at Copenhagen, probably made in the period 925–950, and we know them to be a familiar, rugged, lavishly over-ornamented display of barbaric art that in general character, and in many details,

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closely corresponds to famous barbaric ornaments from the British Isles such as, for instance, the Tara brooch in Dublin. If we select one of these collars and ask what gives it its special Jellinge character, the answer is that it bears interlaces and animal-ornament (FIG. 1) that we recognize as a mannered Scandinavian version of the equivalent Irish or Hiberno-Saxon ornaments. Thus Danish animal-pattern of the Jellinge order is typically a loosely knit and hectic confusion of violently racing creatures. It is a very strong and tempestuous design; but it is also muddled and heavy and unsmooth; and we miss the sweeping easy-flowing graciousness of line that is characteristic of good Late Saxon work in this same vein. The distinguishing feature is the evenness of the emphasis throughout the whole design. It is all, as it were, of one width and one value. We can see this in the runs of interlace, but it is particularly noticeable in the animal-patterns, for the linked creatures are drawn—ears, limbs, and all—in

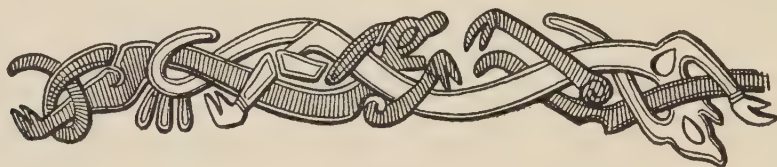


FIG. 1. DETAIL OF HORSE-COLLAR, DENMARK

a single heavy band. There is nothing Anglo-Saxon about this treatment of the lacertine beast. If there were, we should see a greater accent on the dominant and fluent ribbon-form of the animal which would stand out against a filmy interlace of lighter wiry lines.

When we find this Jellinge animal-style in the English Danelaw, it is seen at its best on minor imported ornaments that were brought to this country by the Vikings, and, as might be expected, since it was not originally in its homeland a sculptural style, it makes only an awkward and half-hearted leap from these trinkets into the grander realm of Northumbrian sculpture. Nevertheless there are at least two instances in which the English representative of the Danish Jellinge animal appears on Danelaw stone-carvings in such a markedly foreign guise that the sculptures in question seem to be more Danish than Anglo-Danish. Neither of them, be it observed, is a cross. Crosses were English, and all the so-called Jellinge designs on the crosses are to a much more appreciable extent Anglicized; but these carvings to which I now refer are a small architectural fragment from Clifford Street,

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York,¹ and a fragment of a hog-back tomb-stone (PLATE II, 1) at Pickhill, near Northallerton. Both show a forward-facing animal with a lappet or ear that forms a heavy background of two-strand interlace. They must be carvings of the second half of the tenth century, and I feel that if they were not the work of a Viking, then the sculptor was an Englishman who had deliberately accustomed himself to designs that had a pronounced Danish accent.

It will be wise, however, to ignore mere details of design, such as this Jellinge animal-pattern, and instead to try to recognize a Viking style that reflects in general terms the Scandinavian fondness for a coarsely exuberant, heavy, unsteady barbaric ornament of the Jellinge sort. In practice this is not very difficult to recognize, and it can be easily distinguished from merely crude and clumsily carved Anglo-Saxon ornament. The salient fact is that the Jellinge style represents an un-English method of spreading a pattern over a given surface. A good example is the 'bound Devil' sculpture² at Kirkby Stephen in Westmorland, which is as clearly a Jellinge work as is the Crucifixion face of Harald Gormsson's monument (c. 980) at Jellinge itself. As might be expected, the Isle of Man is a very good place in which to study the style, for the Norse crosses there offer several instances in which Viking art alters, Jellinge-fashion, the character of the decoration on what was originally an Irish-type monument. In the Norse area of England there is one supreme example of the Jellinge style influencing the entire decorative ensemble of an ambitious cross. This, of course, is Gosforth,³ which on stylistic grounds would have to be called Anglo-Norse, even if it did not bear Edda subjects. In the Danelaw we find a strongly characterized Jellinge influence chiefly in certain details of otherwise English crosses, and on the whole it is surprisingly rare. Indeed, I am inclined to think that the Jellinge style was much more important and more firmly established in the Anglo-Norse area than in the Anglo-Danish world, and I suppose the explanation is that Anglo-Saxon art in Yorkshire, the headquarters of the Danelaw, was far more vigorous and effective in the Danish period than is commonly believed. It could, in fact, beat Jellinge art at its own barbaric game. Let me, however, in justice to the Danes, cite first of all an example of the maximum Jellinge influence on an English monument in Yorkshire. This is a fragment of a cross-shaft at Otley in the West Riding⁴; it bears

¹ W. G. Collingwood, *Northumbrian Crosses*, fig. 144. London, 1927.

² Collingwood, *op. cit.* fig. 187.

³ *ibid.*, fig. 184.

⁴ *ibid.*, fig. 175 aa-dd.

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a run of entirely normal Anglian interlace, two dishevelled tightly knotted runs of interlace in the Jellinge manner, and a Jellinge-type animal pattern; in other words, this cross was three-quarters Jellinge, and that is about as far as we get. The other Yorkshire crosses bearing Jellinge ornament are three-quarters English.

Now let us consider the problem of the so-called Jellinge animal. I have mentioned two instances that have a really Danish feel. In my view most of the other examples do not possess a definitely Danish character. I believe that they are neither Scandinavian animals nor English versions of Scandinavian animals, but English barbaric animals returning to fashion as a result of the Viking interest in them. Sometimes, as for example at Otley, they are handled in a recognizably Viking manner; but I do not think this necessarily means they are of Viking origin. It is not hard to find an example of animal-pattern in the Jellinge style that is obviously suspect as regards its origin, for the reason that it is to be found on an accomplished and competently carved English monument. Consider, for instance, the remarkable cross (PLATE I, 1) at Sockburn-on-Tees in co. Durham, just over the Yorkshire boundary. The cross itself is a monument influenced in form by the English 'Round Shaft' crosses, since the lower portion of the shaft is plain, while the ornament of the upper part is framed in a curious manner that represents the 'sliced' faces of the Round Shafts. The tightly woven incoherent mesh of Jellinge-like animals fills one of these faces, and here we have unmistakable evidence of the Viking taste; but another face is panelled, English fashion, and includes Saxon frets and cable-patterns, and a little individual study in the Saxon 'portrait' manner of the animal that appears again so differently treated in the Jellinge passage; and on the other two faces there are full-length runs of fine English interlace; so that the whole cross is thoroughly Anglo-Saxon except for the Jellinge panel and the odd zoomorphic treatment of the bottom ends of the 'slices'. It shows us how gently, as it were, the Viking taste intruded, and how cleverly it could be used by a sympathetic English sculptor to enrich and enliven a nobly planned native carving of the end of the tenth century.

In this Sockburn cross the Danish style does not supplant the English style or even alter the general character of the monument. The most we can say is that Jellinge influence adds a Scandinavian wildness and evenly distributed heaviness to one solitary element in an English design; and as it was the animal-pattern that was particularly susceptible to the Viking taste, we may venture to infer that the obvious Viking

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interest in this respect was responsible for the revived popularity in the late tenth and early eleventh century of the old English theme of the interlacing Ribbon Style beast. For that, I think, is what happened. Anglo-Saxon barbaric animal-ornament was revived. And why not? The English had done all this 'Danish art' business before, and could themselves exhibit their own traditional patterns as subjects for the newly fashionable Danish handling. The well-known coped grave-slab from St. Denis, York, bears a Jellinge pattern in the form of a closely packed and disordered design of animals netted in a thick two-strand interlace; but we observe that some of these creatures are winged and are not really Jellinge animals at all, but the English winged biped. Similarly, on the 'Jellinge' cross-shafts from Folkton, Yorks. (PLATE II, 2), and Gainford, Durham, the basic pattern is not Danish, but the English 'combat' design to be seen on the pre-Danish St. Alkmund's shaft at Derby,⁵ or, going further back, at Breedon on the Hill, Leicestershire.⁶

The immediate English pedigree of these particular designs is to my mind further established by the fact that on the Folkton and Gainford crosses the bodies of the animals are emphasized at the expense of the surrounding interlacements, which are relatively light in weight and do not grossly and closely encumber the form of the creature itself. One asks, in fact, why we call such designs Jellinge work, and the answer is that they do plainly possess something in common with the more outspokenly Danish-fashion carvings, as seen at Pickhill, and this something is simply the Viking taste for a flat, sprawling, and heavily vigorous ornament. The point is that they are not Jellinge carvings because they bear characteristically Danish animals. And this is true of some other so-called Jellinge crosses in Yorkshire that bear an isolated s-shaped beast with backward-bent head such as we see at Middleton (PLATE I, 3), Ellerburn, Nunnington, and Pickering, all places in the North Riding. These beasts are more English than Danish, for the creature comes straight out of the grand period of Anglo-Saxon art, and its real origin is to be sought in the Lindisfarne Gospels; and, though this is the Viking period, they are still drawn English-fashion with thinnish interlacing appendages. They represent, in other words, the antique Hiberno-Saxon barbaric animal-style reappearing as a contemporary of the Danish animal proper, which is *ex hypothesi* its own offspring. To make quite sure about the English

⁵ T. D. Kendrick, *Anglo-Saxon Art*, plate xcvi, London, 1938.

⁶ *ibid.*, plate lxxiii.

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character of the Middleton kind of animal-pattern, we have only to look at the tenth century panelled cross at Aycliffe, co. Durham.⁷ This is good traditional English work, panelled in the ancient Northumbrian style, and it is far too prettily neat and much too methodically organized for us to describe it as influenced by the Jellinge style. Yet a panel on one of its edges contains two interlocked s-shaped beasts of the Middleton type, showing very well indeed the light and open wiriness of the surrounding interlacements that in my view stamp the design as purely Anglo-Saxon work.⁸

The best evidence for the revival of our own animal-ornament in northern England during the Viking Period is supplied by a late tenth century cross in Cumberland outside the Danish area. It will not do to say that the animals on the cross to which I now refer are Norse; for we know what animals in the Norse and Hiberno-Scandinavian variety of the Jellinge style are like, and these creatures are not of their kind. They are to be seen on the face of a fragment of a shaft (PLATE I, 2) at Cross Canonby, and are a free-style series of lively lacertine creatures, without interlacing appendages, that bite viciously with backward-turned heads at their own bodies. The very satisfactory reason for claiming that they are entirely and absolutely Hiberno-Saxon is that the same creatures have already made their appearance in Northumbrian art of an earlier age, and can be seen in the corner panels of the front of the Franks casket (FIG. 2) which was carved about 700. Yet the Cross Canonby shaft is Viking-period work, and if we look at its edge we can see these same creatures combined in an interlacing design that most certainly reflects the Scandinavian taste.

What it comes to is that Jellinge art in Northumbria is not a forcibly imposed Viking style which the Saxons had to copy from Scandinavian originals, but a revival of the old-established system of Hiberno-Saxon art that was to some extent inspired by Scandinavian example, and to some extent influenced by a characteristically Scandinavian type of design. The important point seems to be that at the time of the appearance of Viking art, Northumbrian art was moving in the direction of a Carolingian style, that is to say it was forsaking, although with

⁷ Collingwood, *op. cit.* fig. 97.

⁸ There is a second Aycliffe cross of even greater interest from the point of view of the Hiberno-Saxon revival, but it does not seem to have been illustrated. Collingwood, I think correctly, assigns the St. Oswald's shaft at Durham to this period. I am sorry to say that when I was studying an earlier period I attributed it to the 8th century (*Anglo-Saxon Art*, p. 137). This mistake at least shows that the 10th century revival is real.

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appreciable hesitation, the barbaric style for the classical style. Had it not been for the Vikings in York, the Easby and the Aldborough crosses⁹ would have been followed by others of their kind. The acanthus would have flourished in the place of the withered vine-scroll, and there would have been a Northumbrian 'Winchester' style. It was the Vikings who put back the clock. Themselves loving barbaric art,



FIG. 2. DETAIL OF FRANKS CASKET (x2)

they welcomed an English revival of it in the provinces that they occupied. The timid Carolingian experiments were forgotten, and it was with the ancient art of the Columban missionary Saint Aidan, not that of the Francophile Alcuin, that the Saxon sculptors met the challenge of the Northmen. Let us count it to their credit that imported designs were swept quickly into the background, and that the Viking taste was allowed to do little more than occasionally introduce a note of unrestful dishevelment, that by disturbing the smoother and more

⁹ Kendrick, *op. cit.* plates LXII, LXXXVIII.

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orderly English designs have left us an easily recognizable period-style most appropriate to a turbulent age.

The Ringerike style is the next manifestation of the Viking taste that we have to study. Described in its simplest terms this Ringerike ornament, as Dr Brøndsted has shown, is the southern English acanthus decoration re-drawn in the ragged and irregular Scandinavian manner, and the explanation of the name given to the style is that it is called after a district in Norway where typical examples of the ornament are found. The source of these designs is to be found in 'Winchester' illumination, or in minor arts reflecting this manuscript style, and it is in the southern districts of our country, particularly in the London area and in Wessex, that we find most of the English examples of Ringerike design; furthermore, let us note carefully that these all belong to the period of Viking ascendancy in the eleventh century that began with the successful invasions of Svein (d. 1014) and Cnut (d. 1035) who were kings of England. The Ringerike style, therefore, first made familiar in England in the closing years of Cnut's reign, enjoyed the prestige of being a favourite decoration of a victorious invading people, and it is probable that there must have been quite a taste for Ringerike designs in this country, since, as I shall show, there can be no doubt about the interest taken in them by the English. For this reason the Ringerike style has an entirely different significance from that of the Jellinge style, which, as we have seen, is confined to the Danelaw and the Norse area, and remained, so far as Winchester was concerned, the outlandish idiom of subjugated foreigners.

The supreme masterpiece of the developed Jellinge style in Denmark is Harald Gormsson's memorial stone, erected at Jellinge itself about 980. On one face is the Crucifixion, done Jellinge fashion, and on another face is an animal-combat scene, a splendid lion enmeshed in the coils of a serpent (FIG. 3). This lion is obviously not a Jellinge Ribbon Style animal; it is the Great Beast, as Dr Brøndsted calls him, a magnified and elaborate version of the English lion such as is to be found on the St. Alkmund's shaft at Derby; but the design is complicated by what seems to be a new element, the introduction of acanthus leaves which sprout from the tail and crest of the lion and can be seen budding from the trunk of the serpent. This strangely incorporated foliage was rightly explained by Dr Brøndsted as a contribution from our 'Winchester' art, in which a prodigal display of flourishing acanthus

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scrolls is one of the principal decorative features. There is no difficulty in recognizing the plant on the Jellinge stone, for its fat and fleshy leaves are very like those in most of our Winchester illuminations; and in England beasts with fine tails or crests of this foliage had been known ever since the days of the Book of Cerne (*c.* 825); and there are many examples of them among the later ornamental initials in the English manuscripts. In other words, there is no question about the source of the pattern carved on the Great Beast face of the Jellinge stone, and the carving shows how enormously powerful had been the impression



FIG. 3. DETAIL FROM HARALD GORMSSON'S MONUMENT

made on the Danes by English art in the days of St. Dunstan. Nevertheless this grand sculpture is interesting not so much because of these borrowings, but because of its own indisputable magnificence; for this shows us that at the time of the renewed invasions in the 'eighties' the Danes could boast of a royal and vigorous art.

As we might expect, this altered and impressive Danish Jellinge style makes its mark in the Yorkshire Danelaw where we occasionally find the local Ribbon Style 'Jellinge' beast entangled in an interlace background that breaks into gay little spiral scrolls and waving tendrils. The three examples of what we may call the Yorkshire 'mature Jellinge' that is influenced by the Great Beast Style of Denmark are to be seen on

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the grave-slab at Levisham (PLATE II, 3), a cross shaft at Sinnington, and a cross, a Round Shaft derivative, at West Gilling, all monuments in the North Riding. But though we find the Danelaw Jellinge animal thus embellished with surrounding foliate frills, the carving is heavily and awkwardly done, and can scarcely be described as marking any notable stylistic change in northern England. On the other hand, in southern England we discover a much more significant sequel to the Danish Great Beast style.

We are able to compare the Great Beast sculpture at Jellinge with an Anglo-Danish gravestone carved in London after the conquest of England ; for it happens that the same subject, the combat of the Lion and the Serpent, adorns the tombstone (PLATE III, 2) of a Viking who was buried in St. Paul's churchyard probably about the time of the death of king Cnut. It is a rectangular headstone, two feet in width, and originally painted ; and I think it is beyond dispute the finest Viking antiquity in the country. It is handled in just the same flat style as the Jellinge sculpture, a low relief with a secondary decoration of incised lines, and the two lions are plainly cousins. But the Jellinge heaviness has gone. A gale has swept over the composition. The lion is taut and strained, and his head is turned backwards violently and aggressively ; the serpent is an eddying blast of agitated lines that wave angrily before the chest of the beast, savagely entangle his forelegs, and sweep upwards to do battle with his lashing tail. The slowly waving fat acanthus has vanished. In its place are long extravagant tendrils with tightly curled ends that toss tempestuously in the air. It is acanthus transformed into a new and preposterous barbaric foliage. It is the Ringerike style.

In this, its purely Viking-form, Ringerike foliate ornament appears on two other sculptures in southern England, a grave-slab from St. Paul's churchyard in the British Museum and a fragmentary carving in the church at Great Canfield, Essex. In the north it is to be seen once only, on a fragment of a grave-slab at Otley in the West Riding. In the south, however, in addition to the three carvings I have mentioned, there are several minor antiquities that bear designs in the obviously foreign Ringerike style. A really magnificent example is a bronze panel from a weather-vane that was found in Winchester and is now in the Cathedral Library. It is Viking work of about 1050 with nothing English about it, and I do not know any better example of a design that in a small compass illustrates what I call the Viking taste, here manifested in strong lines stirred into a slowly

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writhing mass that is whipped up into a tremulous agitation at the fringes of the main pattern. It has been suggested, I think with good reason, that there is something oriental about such designs as we see on the Winchester panel. This does not mean that the derivation of the foliate ornament from English acanthus patterns is seriously in doubt, but that the perfected and strongly idiomatic Scandinavian version of our acanthus designs was worked out in the North under influences from the East coming through Russia or Hungary.

Without in any way copying the real Scandinavian Ringerike style, English art nevertheless, upon occasion, produced its own contemporary dishevelled travesty of the acanthus scroll as though in response to this strongly expressed Viking taste. In our eleventh-century sculpture we see this very rarely, but a good example of the kind of thing I have in mind is a grave-stone (PLATE III, 1) from Bibury, Glos.,



FIG. 4. DETAIL OF FRIEZE, SOMPTING

now in the British Museum. It bears a foliate figure-of-eight scroll, in type like that on the weather-vane, and it has the same sort of agitated excrescences, and the same sort of complicated interlacements at the crossing of the main branches. But we notice that the design lacks the extravagant savagery of the true Ringerike style. The foliage is much gentler, much more natural, and is just a poor arid version of the fine acanthus scrolls in our Winchester manuscripts; and when, taking this hint, we find that the interlacements at the crossings, the forward-facing lion-masks, and the dragon-heads at the bottom of the scroll, are all part of the paraphernalia of Winchester art, as seen for instance in the well-known initial in the *Beatus Vir folio* of the British Museum Psalter, Harley 2904, then we have to accept the Bibury carving as bearing an English design vaguely altered in the direction of the fluttering disorder of Ringerike art. To my mind a parallel example is the acanthus frieze (FIG. 4) in the church at Sompting, Sussex, which is long and stalky, and in a curiously ragged disarray.

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In the eleventh-century English manuscripts the point I am now making is perhaps more clearly emphasized. On general grounds we might expect to find some evidence of an appreciable Ringerike-type undercurrent in Saxon work, because it is known that there is a tendency for the fat Winchester acanthus leaf to turn into a thin and lengthy blade with a tightly curled tip, thus approaching in form the true Ringerike leaf. We can see the beginnings of a changed style in the writhing and disordered foliage of the splendid Gospels (B. 10. 4) at Trinity College, Cambridge ; but this nascent Ringerike feel is illustrated here by a detail (FIG. 5) from the Bury St. Edmunds Psalter in the Vatican, in which the leaves, though formally and symmetrically posed,

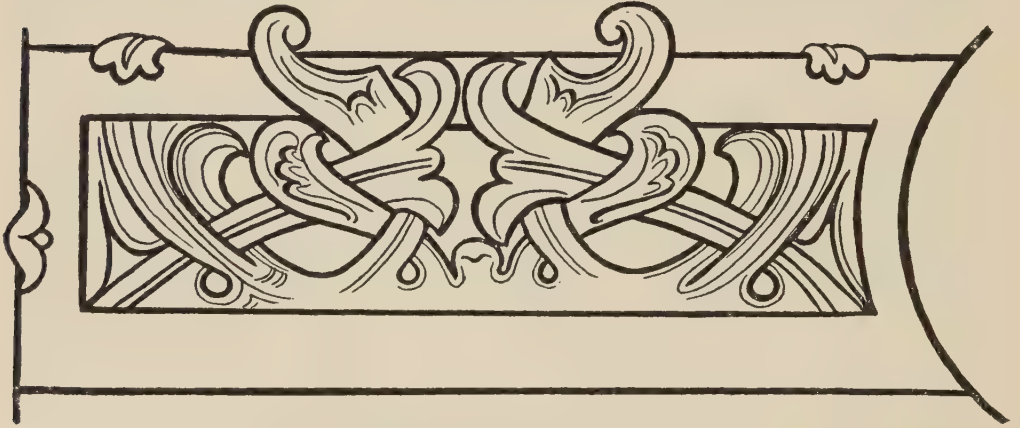


FIG. 5. DETAIL FROM BURY ST. EDMUNDS PSALTER

and unmistakably English in character, can nevertheless be described as storm-beaten, and lean crazily across each other at violently inclined angles. The plainest evidence, however, that there is an independent English approach to the Ringerike type of design is afforded by the group of initials that depend on the types in the Bosworth Psalter in the British Museum, that is Canterbury work of the time of St. Dunstan and may have been prepared for the archbishop's own use. In this Psalter the three principal initials are best described as zoomorphic acanthus-scrolls in the form of a bold smooth interlace made up of a split-bar scaffolding with elongated tendril-like leaves (PLATE IV, 2), and, on initials not illustrated, such unusual features as closed rings and sharp-cornered 'elbows' with an interior acanthus frill. These initials are also remarkable for their colouring, which is

PLATE I



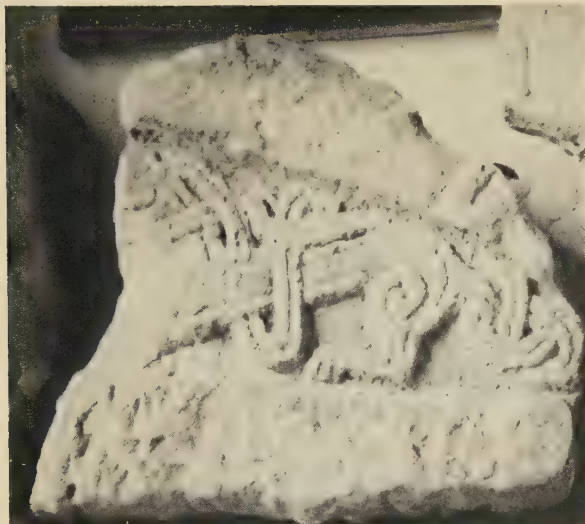
3. MIDDLETON (see p. 129)
height of panel, 22 inches
Ph. Lawrence Stone



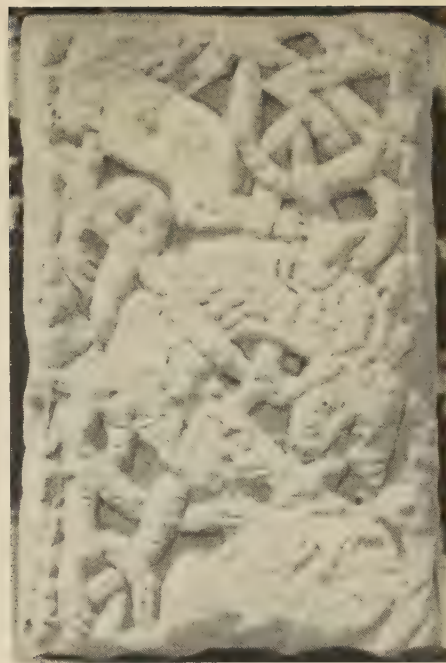
2. CROSS CANONBY (see p. 130)
height, 21 inches
Ph. B. Clayton



1. SOCKBURN (see p. 128)
full height, 7 feet
Ph. B. Clayton



1. PICKHILL (*see p. 127*)
length, 19 inches
Ph. J. E. Tetley



2. FOLKTON (*see p. 129*)
height, 16 inches
Ph. J. E. Tetley



3. LEVISHAM (*see p. 134*), length, 25 inches
Ph. T. D. Kendrick



1. BIBURY (*see* p. 135), height, 25 inches
Ph. British Museum



2. ST. PAUL'S CHURCHYARD (*see* p. 134), height, 21 inches
Ph. Guildhall Museum



1. PSALTER, CAMBRIDGE UNIVERSITY LIBRARY
MS. Ff. 1. 23, f. 37 v, detail (see p. 139)



2. BOSWORTH PSALTER, BRITISH MUSEUM
Add. 37, 517, f. 4, detail (see p. 139)



3. PSALTER, CAMBRIDGE UNIVERSITY LIBRARY
MS. Ff. 1. 23, f. 5, detail (see p. 139)

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crude, jarring, and cold. In origin this style is Frankish, but the Psalter presents a most extraordinary barbaric insular version of the Frankish work from which it is chiefly derived, and it is a very astonishing thing that such a style should flourish in the south of England in the 'Winchester' period in an important manuscript believed to have been used by St. Dunstan himself. We get an unexpected revelation of what we may describe as a generally suppressed tendency of south English art in the tenth century, and when we find this style further developed in some of the author-texts of the first half of the eleventh century, we must admit an English disposition to welcome the kindred Ringerike work. I take it as certain that the artists who drew these initials would find nothing distastefully foreign and unacceptable in a true Ringerike pattern such as that, which a few of them may have actually seen, on the Winchester weather-vane. The design on this piece would, in fact, be likely to give them very great pleasure, and thus I say that in the details of one or two of the great ecclesiastical manuscripts of the real Winchester type and in the background of these minor decorative initials, we may feel some possible community of taste emerging which would help to explain the Viking's choice of the English acanthus scroll as his theme for the Ringerike design and the Englishman's friendliness to the Viking version of it.

There can be no doubt about this friendliness. In the Caedmon manuscript (Junius xi) in the Bodleian Library, an English work of the period 1030-1050, on a blank space at the end of the book, is a design for the binding; it is obviously one man's work, and yet the face is a good English acanthus pattern and the spine is a length of genuine Ringerike ornament. There is no mistake about it; for on the end page of the book are drawings in the same hand of two oval loops, probably designs for the metalwork clasps of the binding, that bear pure Ringerike pattern of the most sophisticated sort.¹⁰ The sketches show that this particular English artist was, as it were, bilingual, for he could draw traditional Winchester acanthus designs and also foliate patterns in the Scandinavian style, these last being done as well as any Viking could do them. Perhaps the Caedmon artist was deliberately trying to please two masters, an English ecclesiastic and a Viking royalty; for we certainly cannot pretend to be surprised at the juxtaposition of the English and Viking Styles in the artistic output of an Anglo-Danish society that doubtless had very good reason for narrowing

¹⁰ A. W. Clapham, *English Romanesque Architecture before the Conquest*, p. 135, fig. 42. Oxford, 1930.

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the gulf between the two arts by clever combinations of this sort. My point is that the union was made easier by the existing barbaric tendencies in south England art. I have already given an example of the kind of work I have in mind, and there are others to be found in this same Caedmon manuscript; for instance a drawing of Cainan sitting in judgment in an architectural frame that is at once notable for the ludicrous dishevelment of the foliage in the capitals (FIG. 6). The disordered mixture of leaves and bony interlace not only fails to have any architectural steadiness, but spills itself off the capital and waves



FIG. 6. THE CAEDMON MS. (detail of f. 57)

crazily into space. A column at the side of the charming scene of the Judgment on the Serpent bears similarly erratic and ill-disciplined ornament. It is just untidy nonsense, not part of a comprehensible and systematized decorative scheme; and we must regard it as a little period drollery very prettily inserted in what is otherwise fairly conventional south English drawing. But the important thing is that these two passages harmonize completely with the Ringerike designs in the same book.

There is one manuscript in which the Ringerike element is not an interpolation, as in the binding design of the Caedmon manuscript, but really an important element affecting the main ornament of the book.

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This is a Psalter of *c.* 1050 in Cambridge University Library. It contains some crude and ill-proportioned full-page drawings in orange-red and green that copy with an obvious awkwardness the Winchester manner, a variety of English initials in a purely Anglo-Saxon tradition, and also a number of initials that really do possess the true Ringerike feel. There is no other word for them but Anglo-Scandinavian. To perceive the significance of this foreign artist's style we must look at his handling of an orthodox English subject, the great initial *B* of the *Beatus Vir folio* (PLATE IV, 2), and compare it with the most celebrated of the tenth century Winchester versions, the British Museum Psalter, Harley 2904 (probably Ramsey work of *c.* 970). In the first place the design in the Cambridge manuscript has ceased to be a heavy dominating initial in brilliant colours. It is a wispy, faint thing outlined in pale umber with a little light yellow interior colouring. Furthermore, it is caught up into the overpowering ornamental system of the whole page, and is linked to the frame itself by the biting animal-heads at the corner of the upright. What it has lost in solidity, it has gained in liveliness and vigour. The acanthus is thinner; it reaches out long curling tendrils and clutches tightly; a new and animated wiry disorder possesses the entire letter, and the same excited turbulence is to be seen in the frame that is filled by acanthus whipped up into a violently agitated array of swaying leaves, some of which, quite irrationally, blow out from the bars of the frame into the surrounding space. It is more than the mere English counterpart of the Ringerike style which I have described, for instance on the Bibury stone; it is an indubitable approach, though using an English design and a purely English apparatus, to the actual Scandinavian idiom; and therefore it is no surprise to us, when we examine the manuscript further for this particular artist's work, to find that some of his smaller initials, drawn in brown with green and buff fillings, are closer still to Scandinavian Ringerike (PLATE IV, 1). They show the long bare Ringerike tendril, and the fiery flourish of these spirited tentacles is such that a Viking must have declared them to have been copied off one of his own monuments. Thus on the evidence of this manuscript we find in southern England in the middle of the eleventh century a nicely balanced state of affairs in which there seems to be a real possibility of some sort of fusion between the Winchester and the Ringerike styles, which had already appeared side by side in another manuscript. It is important, however, to say roundly that there is in fact no evidence that this fusion was achieved, or even that it was generally desired. What I am trying to emphasize here is a general

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sympathy and an occasional approach one to the other. The Cambridge Psalter is an exceptional testimony to this approach; and I introduce it not as a guide to a general tendency of Anglo-Saxon art, but as an illustration of the solitary vagaries of one original artist.

We have seen that in northern England the Ringerike style in a recognizable form is found once only, namely at Otley. Nevertheless certain Northumbrian crosses, bearing what I call 'belated scrolls', that is to say the final degradations of the original Anglian vine-scroll, seem to possess in certain details a faint Ringerike flavour, as though distantly influenced by the Viking taste that had become so fashionable in the south. An example is to be seen at Staveley, between Knaresborough and Boroughbridge, in the West Riding, where there is a cross-shaft ornamented on the face with a degenerate figure-of-eight scroll above which is a tangled interlace ending in draggled tendrils, that, though lacking the authentic Scandinavian fieriness, are however of the Ringerike kind. The same thing can be seen on a cross at Barwick-in-Elmet, close to Leeds; but it is in this city itself that we have the best example, for on the fine panelled cross in the chancel of the Parish Church there is a length of interlace that breaks into a vigorously waving tangle of these characteristic tendrils with the curling tips. I doubt whether a Viking would have recognized that the Stavely and Barwick patterns were influenced by the Ringerike style; but at Leeds he would have been very much impressed at finding something that really does look like a little bit of his native art flaunted on a cross that was otherwise entirely English in character. Of course, even this, added to the undoubtedly Ringerike carving on the grave-stone at Otley, does not amount to very much, and it remains true that the story of the Ringerike style in England is one that almost exclusively concerns our southern art.

The uneasy harmony between the two styles that we have been able to detect in the undercurrents of Winchester art does not in any way alter the dominant fact that they were indeed irreconcilable. Winchester painting and drawing represented the classical tradition and were principally concerned with naturalistic portrayal of the human figure, while Viking art brought to England nothing but abstract barbaric ornament. Though the political ascendancy of the Vikings may be responsible for the apparent friendliness with which this ornament was upon occasion welcomed into English work, it is by no

THE VIKING TASTE IN PRE-CONQUEST ENGLAND

means true that the victorious Danes sought to belittle or discountenance the immeasurably more impressive native art. On the contrary, the court style of the English kings became the court style of the Danish conquerors, and there is convincing proof of this in the New Minster Register, a British Museum manuscript of about 1020, in which there is a picture of king Cnut, accompanied by his English wife Aelfifu Emma, placing a golden cross upon the high altar of the monastery. It is a purely English work, done with all the natural grace and fluency of Winchester drawing at its best, and it shows us that in the hour of his triumph a Viking, who had been crowned king of England, paid homage to the art of the conquered people, and as a good Christian monarch of European importance sponsored the traditional art of Christendom and of Western Civilization. Under such plainly declared royal patronage the Winchester style continued to flourish up to, and even beyond, the date of the Norman Conquest, while the Danish style after some inconsequential initial success in this country accordingly falters and fails. We have to remember that there is no evidence that the Ringerike style appears in this country before the closing years of Cnut's reign, and thus condemned by its own principal protagonist to a place in the background, its relative insignificance is not surprising. The real position is that against the few instances of its intrusion into English work cited here, must be set a large body of noble manuscripts and fine sculptures of the first half of the eleventh century, upon which the Viking taste had made no impression. Thus, summing up as regards the Ringerike style, it is on the whole true that in spite of the Danish ascendancy there is only evidence of slight and not profound Viking influence upon southern English art up to the time of the Norman Conquest. On the other hand, some decades afterwards, with the appearance of the Urnes style, we find ourselves once more involved with the problems of Scandinavian art; but I think that English Urnes lies outside the scope of this paper.

A Datable 'Ritual Barrow' in Glamorganshire

by SIR CYRIL FOX

IN the *Antiquaries Journal* for April, 1941, a series of three barrows in Llantwit Major parish, near the sea-coast of Glamorganshire, has been described.¹ All showed stake circles under mounds of turf; in the largest a primary burial by cremation with a Middle Bronze Age B overhanging-rim urn gave some indication of the period within which the others should be placed. One of them, Six Wells 267', contained no burial; there was no charcoal or pyre material and the 'floor'² was clean. In the centre was a hole carefully made, carefully filled, and domed over. I described it as a 'ritual pit' and the barrow as a 'ritual barrow'; recorded parallels appear to be rare.

A barrow 280 yards to the north of Six Wells 267' is shown on the map of the district (FIG. 1); it is named Six Wells 271' from the farm and from the height of its crest above sea-level. This barrow was investigated in October 1940 and is the subject of the present article (which owes much to my wife's help).

Six Wells 271' measured 90 feet in diameter and over 6 feet in height at the centre. It proved to be a turf mound of the same type as 267' but contained, in addition to 'ritual pit' and stake circle, a cremation burial in a cist. The structures disclosed will be described in the probable order of their creation; (1) the 'ritual pit' (and its immediate surroundings), (2) the stake circle; (3) the cist; (4) the barrow.

A hedge-bank and ditch crossed the top of the barrow, which had, moreover, been extensively dug into in recent months. Its condition thus dictated an investigation on the simplest lines possible. Two broad trenches were accordingly cut at right angles to one another across the approximate centre of the barrow; further clearances (all down to original ground level or below it) were limited to the minimum necessary to establish the character and date of the structure. The extent of excavation is indicated on the Plan (FIG. 2).

¹ 'Stake Circles in Turf Barrows; a record of excavation in Glamorgan, 1939-40'.

² i.e. the ancient ground surface under the mound.

DATABLE 'RITUAL BARROW' IN GLAMORGANSHIRE

THE 'RITUAL PIT'

In the centre of the barrow (Plan, FIG. 2; Sections, FIG. 7) a dome of earth and clay was located, slightly harder than the surrounding barrow material; it was 14 inches high and 16 inches broad at the base. It is seen bisected in PLATE I, A. It consisted of a shell of mixed soil and clay (PLATE II, A) enclosing a mass of dark earth with pebbles of the local lias and chert. As in the case of barrow 267', there was a circular pit under the dome. This pit (PLATE II, B) was 12 inches in diameter,



FIG. 1. MAP OF THE DISTRICT, SHOWING DISTRIBUTION OF ROUND BARROWS

and contained, on one side, similar material to that within the dome, which graded down into brown soil filling a narrow pipe in the Lias rock; on the other side there was dense grey clay which also appeared to be an artificial deposit.

In order to make sure that the pit did not contain a burial it was opened out to an unbroken rock surface, 2 feet below the base of the dome. The filling here was natural; yellow clay and disintegrating Lias nodules. FIG. 3 illustrates the structure in detail; it shows also the character of the barrow around and above it. The layer of 'orange clay', being a colour-change in a natural clay deposit, is probably slightly below the

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'floor' hereabouts at the time the dome was constructed.* Levels taken at various points, and evidence afforded by the stratification of the subsoil here and elsewhere, suggest that from 6 to 9 inches of turf and soil had been removed in the neighbourhood of the 'ritual pit'. This accounts for difficulties of interpretation, and the consequent vagueness of the figure; artificial and natural deposits graded imperceptibly one into another.

FIG. 3 shows, in addition to the pit, a dip in the 'orange clay' which can only have been induced by an artificial hollow made immediately above it. The relation of this hollow to the pit is best seen in PLATE II, B. It was filled with the greyish clay which hereabouts overlies the orange band. It should be noted that an artificial hollow, adjacent to the ritual pit, was demonstrated in barrow 267³.

There was no trace of burning near the pit; no charcoal in it or near it; no evidence of trampling, and no 'dirty' soil around it.

THE 'UNTRODDEN AREA'

Examination of the central portion of the barrow showed that removal of the ancient surface soil extended over a patch of some 30 square feet, mostly to the south of the pit. Beyond was an extensive area which, like the central patch, presented a feature rarely seen elsewhere on the barrow floor, namely, absence of the ferruginous deposit known as hard-pan. This deposit, commonly met with in turf barrows, is precipitated on comparatively impervious layers, due almost certainly to trampling. I conclude then that on the larger area to which I have referred trespass by the feet of men was avoided; and it is reasonable to suggest that since trampling obviously could not be avoided on the patch of ground immediately around the pit, its evidences were destroyed by the removal of the turf layer.

The area is defined on the Plan, FIG. 2, by the absence of stippling, the inner patch by a broken line.⁴ Under the whole of it the 'orange clay' already referred to was present. Both Sections in FIG. 7 illustrate the striking difference between the hard-pan-covered (trodden) and bare (untrodden) areas; show the position of the orange band; and indicate the patch where the surface soil has been removed.

* The circumstances, chemical and physical, which give rise to this layer, are under consideration by Dr F. J. North.

³ *Antiq. Journ.*, loc. cit. p. 119, and plan, pl. xxviii.

⁴ An approximation. Its limits were not accurately measured.

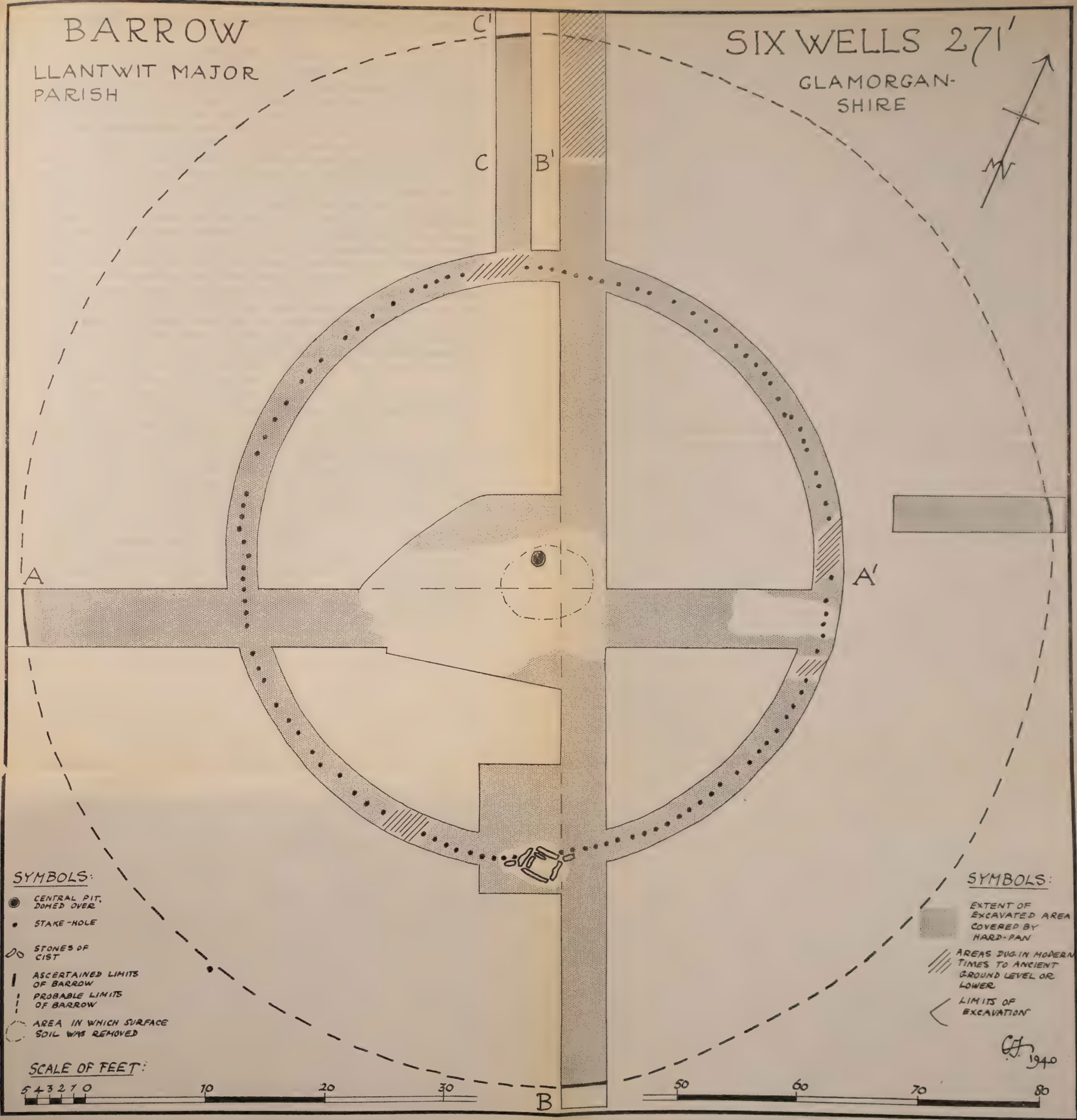


FIG. 2. PLAN OF BARROW



DATABLE 'RITUAL BARROW' IN GLAMORGANSHIRE

THE STAKE CIRCLE

A stake-hole about $2\frac{1}{2}$ inches in diameter and 10 inches deep, defined by a ring of dense black-and-yellow incrustation of iron oxide, was found in the west trench. It was 25 feet from the 'ritual pit'; and a circular trench of this radius being opened up, a complete stake circle was demonstrated, as shown on the Plan, FIG. 2.

In the southern part of the circle all the holes were as described above, and were readily found; in the northern part no trace could be seen of the great majority on the hard-pan floor of the barrow; but when the hard-pan was dug away and the natural soil thereunder disclosed, the stake-holes—sometimes unfilled and without any marginal incrustation, sometimes unfilled with a soft black ring, and sometimes filled with earth and so presenting a darker circular stain—were found in the ancient soil and subsoil. In short, these stakes had been 'drawn' before the barrow was built. This was also the case in barrow 267', where the whole of the circle had been so removed.

As for the depth, our pegs, which were a foot long, sometimes dropped into a hole with their tops level with the ground, and it was always possible to press them into the yielding filling for 9 or 10 inches. One hole, larger than usual, in the southeast quadrant, was open to a depth of 15 inches. As for size, while the great majority seemed to represent stakes from 2-3 inches in diameter, there were a few of 1-2 inches and fewer over 3 inches.

The number of stake-holes disclosed was 108⁵; there were probably six more, destroyed by the digging of sump pits in recent times (see Plan), making a total of 114.

The accuracy of the lay-out of the ring of stake-holes is remarkable. A circle struck from the centre of the 'ritual pit' on a radius of exactly 25 feet passes through no less than 64 of them, and the maximal error in the case of the other holes within or without the circle thus described is 9 inches. Such accuracy is rare in prehistoric lay-outs in this country. Incidentally, of course, it emphasizes the primary importance of the 'ritual pit' in the scheme of the monument.

The distances *between* the stake-holes, on the other hand, was very variable, as a glance at the Plan will show. To the south and southeast of the 'ritual pit', on either side of the cist (p. 149) the spacing of the stakes is most uniform and they were here closest together (± 1 foot); elsewhere only small groups showed any uniformity.

⁵ I omit from all future consideration the inner stake-hole of the close-set pair in the northeast quadrant (see Plan).

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Some of the interspaces, especially in the western part of the circle, are so wide (two being as much as 2 feet 9 inches and 3 feet 6 inches respectively) as to raise the question of an entrance or entrances.⁶ It should be noted that there was a gap in the same part of the circle in barrow 267'.

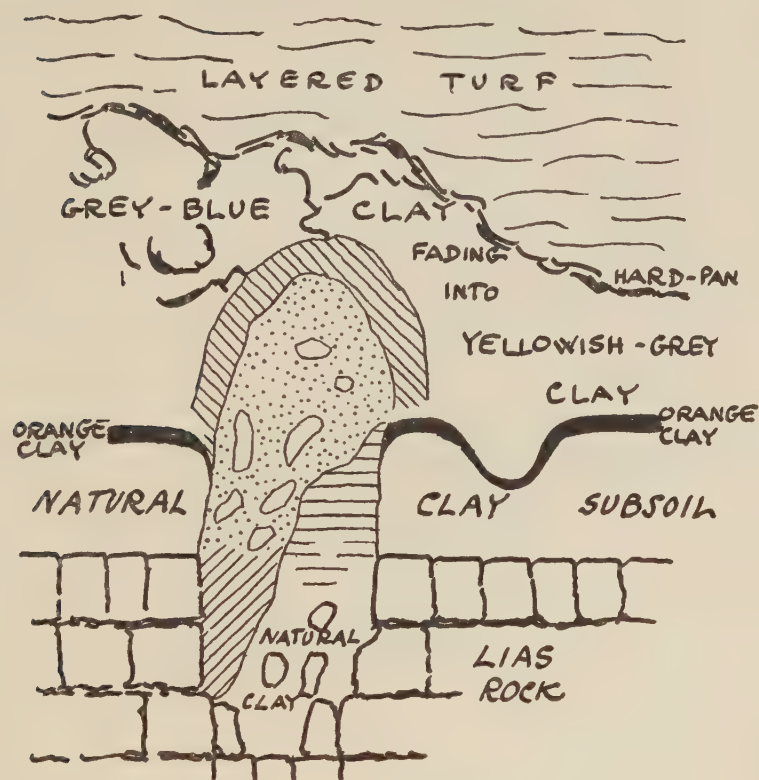
Interspace in feet and inches		Number of such interspaces	Expressed as percentage of 102 measurable interspaces
ft.	ins.		per cent.
0	8	2	2.0
0	9		
0	10	2	2.0
0	11	7	6.8
1	0	11	10.7
1	1	23	22.5
1	2	8	7.8
1	3	14	13.7
1	4	7	6.8
1	5	2	2.0
1	6	2	2.0
1	7	4	3.9
1	8	3	2.9
1	9	3	2.9
1	10		
1	11	2	2.0
2	0	2	2.0
2	1	2	2.0
2	2	2	2.0
2	3	2	2.0
2	4	2	2.0
2	9	1	1.0
3	6	1	1.0

In the Table on this page the incidence of each unit of distance is expressed as a percentage of the total number of interspaces.⁷ It will be seen that the incidence of the interspace of 13 inches is more than double that of any other, accounting for 22.5 per cent. of the whole ;

⁶ Every care was taken in such cases as these to establish the fact of the gap.

⁷ All measurements are from centre to centre of the holes.

NORTH GRASS LEVEL OF BARROW 5' 11" FROM TOP OF 'DOME' SOUTH



SCALE OF FEET:



SYMBOLS:
 (DOME AND PIT ONLY)
 /// ENVELOPE OF MIXED SOIL
 ○ DARK EARTH WITH STONES
 /// BROWN SOIL
 — GREY CLAY GRADING INTO
 — NATURAL YELLOW CLAY

GA.
 1940

FIG. 3. THE DOME AND PIT, NORTH-SOUTH SECTION

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and that within the comparatively narrow range of 11 to 16 inches 70 interspaces, representing 68.6 per cent. of the series is concentrated. The average length of the 70 interspaces is 13.4 inches. The average length of the whole of the interspaces except the two large gaps, 100 in all, is 15.5 inches. Both these figures are paralleled in the stake circles of the adjacent barrows. One quadrant of the only circle in Sheeplays 279' was examined; the interspaces averaged 13.3 inches. A long series of interspaces of each of three circles in Sheeplays 293' was measured; they averaged 15.6, 15.3 and 16.0 inches respectively.⁸

We can only suppose that, as was suggested in the paper from which these related facts are taken, some standard system (or systems) of wattling or interlacement which provided for a given number of verticals in a given length of construction was employed by the folk living in this district in the Bronze Age.

It was expected that evidence of the decayed posts would, on the analogy of the barrow Sheeplays 293', be found in the overlying turf mound; and that since the mound was over six feet high valuable evidence as to the character and height of these fences would be obtained. No such features were present, no stake-hole being found until excavation had been carried close to, or into the ancient surface.

I have said 'close to': for evidence was obtained in the case of three stake-holes widely spaced in the south-eastern quadrant that the stakes were, at the time of the construction of the barrow, some 3 inches high, i.e. above the original ground level. PLATE I, B, shows one of the stake-holes, the ground level being shown by an arrow. The hole ended abruptly and there was no trace of a post in the barrow material above it. Another such hole is described on p. 150. We know that some of the stakes were drawn before the barrow was built; the rest, it would appear, were no more than 3-4 inches high when they were covered up. Two explanations are possible; either the fence formed by the stakes was never any higher than this, being a warning against, rather than a preventive of, trespass on a sacred area, or those stakes which for some reason unknown, were left in the ground when the barrow was built, were sawn off.⁹ They would certainly have got in the way of the barrow-building, as they did in barrow 293' at Sheeplays.

Before passing on to the next section, it should be stated that there

⁸ See *Antiq. Journ.*, loc. cit., pp. 101 ff. and 117, where these stake circles are discussed.

⁹ A not impossible operation, for bronze saws are known in the Late Bronze Age, and flint saws preceded these.

DATEABLE 'RITUAL BARROW' IN GLAMORGANSHIRE

is no possibility of a second circle having been present within the fifty-foot circle. The floors of the four quadrant trenches and of the central area, were examined with negative results.

THE CREMATION BURIAL

The continuity of the stake circle was broken at one point in a remarkable manner. A pile of stone soon recognizable as a cist (PLATE III, A) was encountered on the line of that circle south-southeast of the 'ritual pit'. It is superficially of a common Bronze Age character and

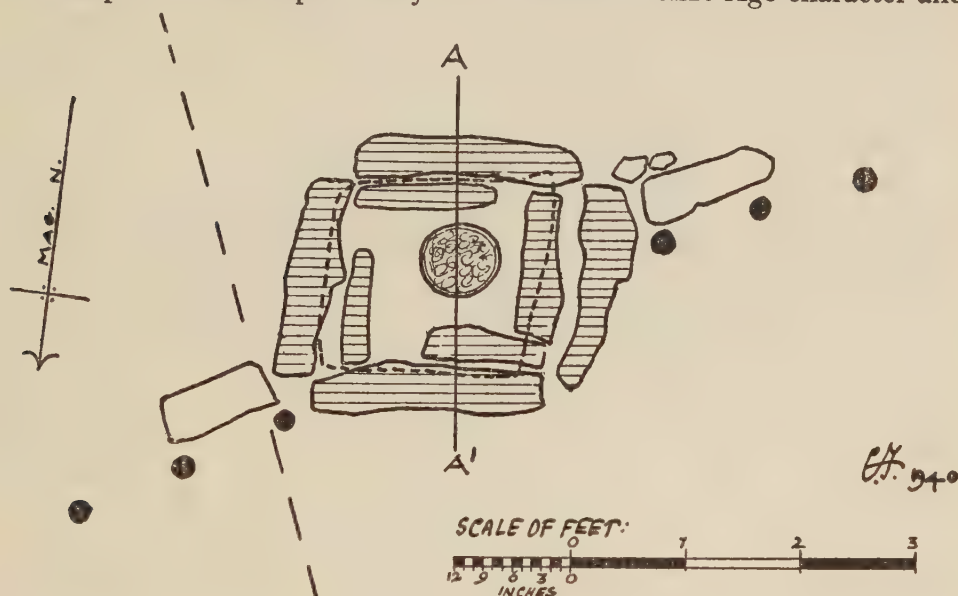


FIG. 4. THE CIST: PLAN

size, consisting fundamentally of four slabby orthostats with a similar stone atop—a stone box with a cover, the stones being of the local limestone. Its minor characteristics are, however, peculiar. It is diamond-shaped, not rectangular; each of the points of the longer axis is extended by a long rectangular stone, and three rounded boulders crown the structure. On the removal of these, and the cover, the orthostatic slabs are seen to be duplicated, in a manner which lessens the area within as well as (on one side) extending it without (PLATE III, B).¹⁰

¹⁰ One inner slab, which extended diagonally downwards from the upper corner on the photograph, was removed before this was taken.

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Further investigation showed that the cist was unstable and ill-constructed and the duplication of its sides mainly intended for mutual support. The two western orthostats were long narrow slabs, the inner only 6.5 inches deep and the outer 11 inches. The only well-bedded stone was the southern orthostat which had a pointed base and was 19 inches in depth.

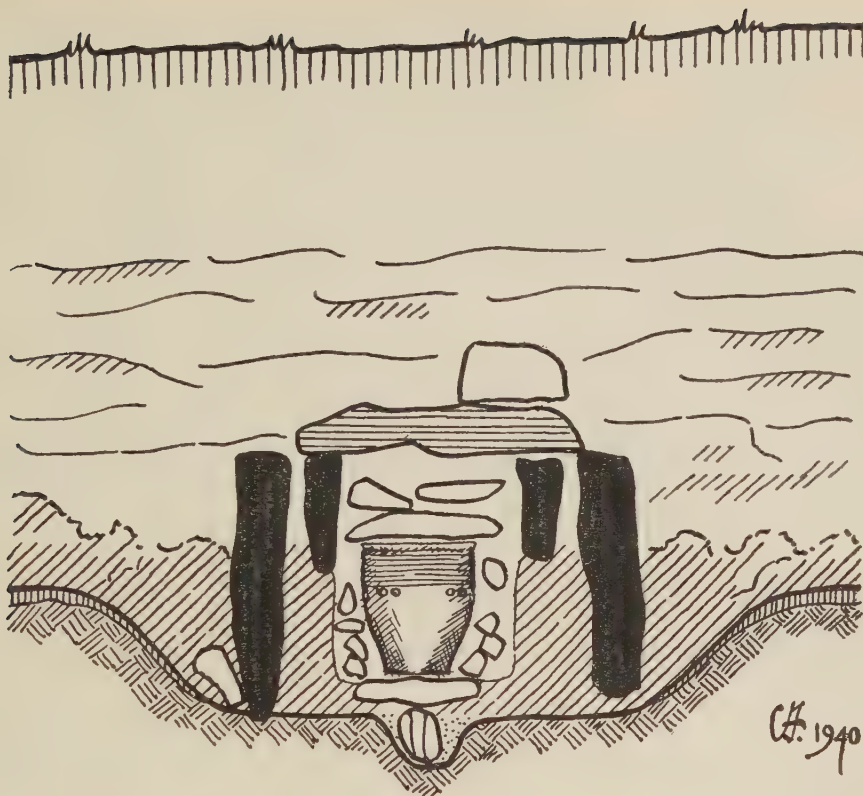
The cist was constructed in the following manner, illustrated in FIG. 5. A broad shallow hole with sloping sides having been made, the stones forming the sides of the cist were wedged up with or bedded in clayey soil of the same character as that used in the barrow generally. This layer extended round the cist to a height of some 3 inches above the ancient ground level, and on it the flat stones projecting at either end of the long axis of the structure were laid.

The relation of this cist structure (which measured 2 feet 4 inches across and, with its extensions, 5 feet 8 inches in length) to the stake circle is intimate; its long axis is parallel to the line of stakes, and the placing of the extensions is particularly significant. The axis of the cist, be it noted, is definitely outside the circle. All these points are illustrated in a photograph (PLATE IV, A)¹¹ and in a plan (FIG. 4).

The lay-out, then, conveys an intellectual assurance that cist and stake circle form one design. We can supplement this by direct proof. We know that the cist was present when the turf-barrow was built, for the line of the turves across it was seen to be unbroken (FIGS. 5 and 7 and p. 156); and a further piece of evidence shows that the order of construction was first the circle, then the cist.

Half hidden under a spur-stone beside the upper left-hand corner of the cist in PLATE III, A is a small piece of lias whiter than the rest. The under surface of this is 3-4 inches above the natural ground level. On removal it was found to form, as it were, a lid to a stake-hole 2 inches in diameter. It must indeed have originally been resting on—supported by—the flat top of the stake which formerly occupied the hole; for since the upper 3-4 inches of the hole was in 'made' ground, this hole could hardly have remained open unless the stake was in it while this ground was consolidating. The hole, being on the line of the north-south trench, is recorded in section in FIG. 7, and it is the third from the left in the plan (FIG. 4).

¹¹ For this photograph the lid was replaced on the cist. It was taken some days later than the others, when the whole area had been cleared to ground level and the stake-holes revealed. The Lias limestone dries out white; hence the strong contrast between the structure and the soil.



SYMBOLS:

- | | | | | | |
|--|-----------------------|--|-----------------------------|--|----------------|
| | ORTHOSTAT | | COVER-STONE | | OTHER STONES |
| | PRESENT SURFACE | | UNDISTURBED SUBSOIL | | TURF |
| | CLAYEY BASE OF BARROW | | HARD-PAN ON FLOOR OF BARROW | | EARTHY DEPOSIT |

FIG. 5. THE CIST: SECTION A-A' ON PLAN

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Reference was made on p. 148 to the evidence for short, or shortened, stakes in the circle ; here incidentally is the best example of all. From our present point of view the discovery indicates not only that the cist was constructed after the adjacent sector of the stake circle, but also that this stake circle was then actually present and undecayed. On the other hand, the fact that several stakes were set within the margin of the large shallow basin excavated before the construction of the cist (p. 150) shows that the cist was taken into consideration in the original lay-out : *was in fact part of the original design.*

These things being so, the contents of the cist, in so far as they are datable, will enable us to place ritual barrows of the Six Wells 267' and 271' class more exactly in the cultural sequence of the Bronze Age than was possible when the former was described. These contents will now be considered. Under the cover of the cist, in the centre, a flat stone was seen ; this formed the lid to an urn filled with burnt bones which in consequence was shattered by pressure. PLATE III, B was taken immediately on exposure ; the rim of the urn is seen to be cracked. On clearing the cist the urn was found to have been placed on another flat stone over a small hole in the natural subsoil in which a Lias pebble had been placed (see section, FIG. 5), and Lias stones were packed round it.¹²

There was no charcoal in or near the cist ; and the most careful search through the burnt bones in the urn (which were quite clean), resulted in the collection of four small pieces only. My colleague, Mr L. F. Cowley, who has kindly examined the bones, reports that :

'The material was fragmentary and yielded but little evidence of value. That it represents but one person I have no doubt since there was no duplication of parts. A portion of the head of a humerus together with a small portion of the shaft of the bone showed no signs of lack of fusion ; the person must therefore have been over 20 years of age. As to sex I am not certain, but the piece of humerus mentioned above and a portion of the mastoid process of the left temporal bone by their size suggested that they belonged to a male '.

THE URN

The urn was rebuilt in the Department of Archaeology of the National Museum of Wales. The fragments were very soft when

¹² The fine earth which fills the cist in the photograph gained entrance through the many holes and cracks in the structure. The placing of flat stones above and below the urn is a not unusual Bronze Age technique in South Wales. cf. *Arch. Camb.*, 1936, pp. 116-17, and *Procs. Soc. Ant.*, 2 s., vol. II, p. 431, describing the Golden Mile Barrow, Colwinston, Glam., where the practice dates from c. 700 B.C.



A. DOME OF THE 'RITUAL PIT', HALF CUT AWAY, FROM THE SOUTHWEST (see p. 143)
Ph. National Museum of Wales



B. STAKE-HOLE IN THE BARROW, 3 INCHES ABOVE GROUND-LEVEL, AND 2½ INCHES
IN DIAMETER (see p. 148)
Ph. National Museum of Wales



A. DOME OF THE 'RITUAL PIT', PARTLY CLEARED AWAY, SHOWING ITS 'SHELL'; FILLING OF PIT BENEATH PARTLY REMOVED. FROM THE WEST (*see* p. 143)
Ph. National Museum of Wales



B. THE 'RITUAL PIT', CLEARED, AND ADJACENT HOLLOW, FROM THE SOUTH (*see* p. 144)
Ph. National Museum of Wales

PLATE III



A. THE CIST, UNTOUCHED, FROM THE WEST

(see p. 149)

Ph. National Museum of Wales



B. THE CIST WITH LID REMOVED, SHOWING URN WITH BURNT BONES

The top of the photograph is northeast

(see p. 150)

Ph. National Museum of Wales



A. THE CIST WITH LID REPLACED, SHOWING ITS EXTENSIONS AND ITS RELATION TO THE STAKE CIRCLE (MARKED BY PEGS), FROM THE NORTHEAST (see p. 150)
Ph. National Museum of Wales



B. THE URN FROM THE CIST, RECONSTRUCTED. THE ORIGINAL CONTOURS OF THE BODY WERE PROBABLY MORE CONVEX

Height 9 inches (see pp. 152-4)
Ph. National Museum of Wales



C. AN URN FROM ELWORTHY, SOMERSET

Height 9½ inches (see p. 154)
Ph. H. St. George Gray

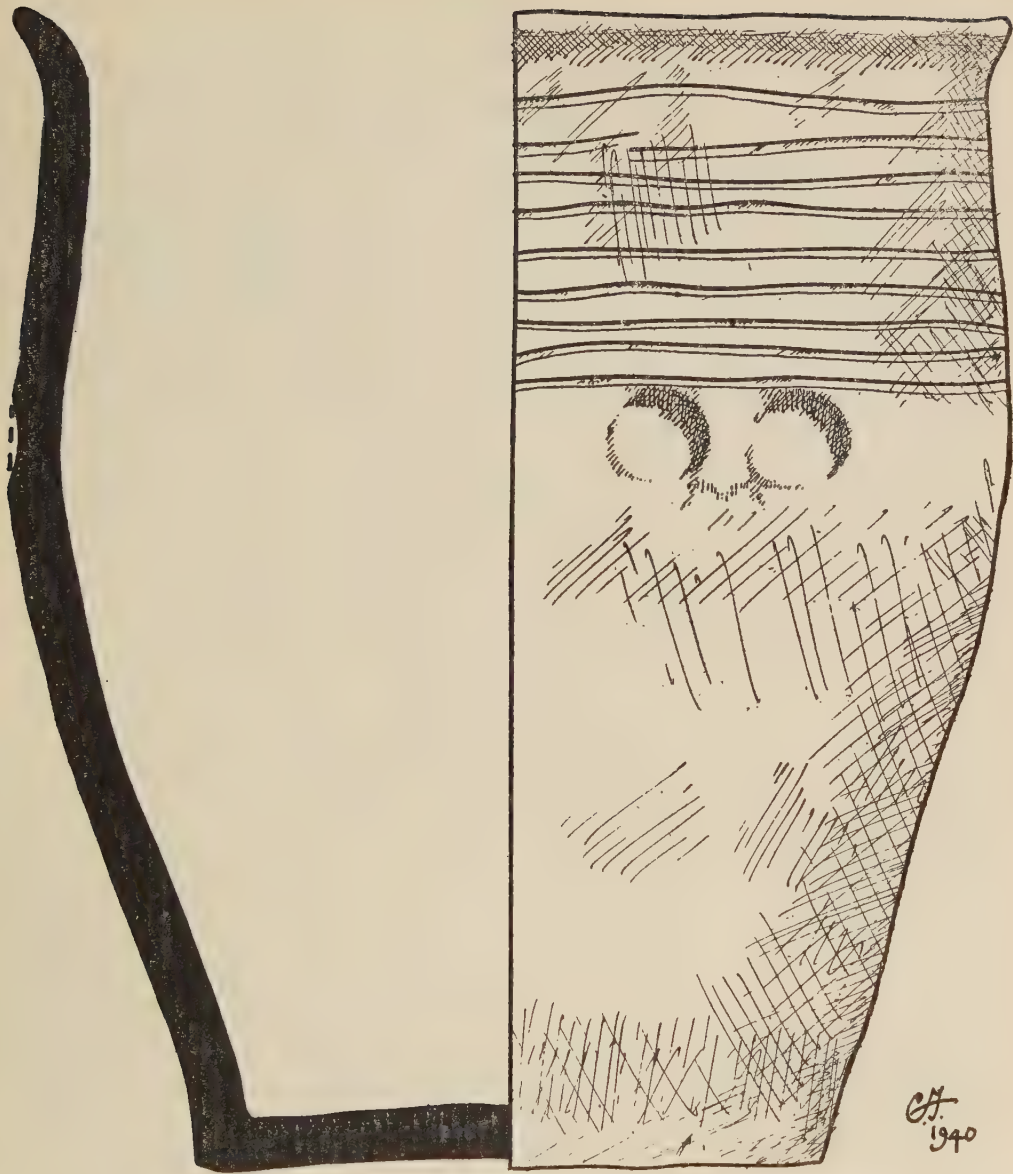


FIG. 6. THE URN. THE FULL CURVE OF THE BODY SHOWN ON THE LEFT REPRESENTS THE PROBABLE ORIGINAL FORM OF THE (RECONSTRUCTED) VESSEL

Scale (3)

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excavated, and had warped under pressure; the sectional portion of the drawing (FIG. 6) more accurately represents its original outline than the photograph (PLATE IV, B). The urn proves to be just over 9 inches in height, a stocky vessel weakly caliciform, with a flared rim well formed in places, elsewhere irregular. The ill-baked ware, of native Bronze Age character, is gritty but the grits are small. The vessel is on the surface brownish-red to greyish-yellow with ill-defined blackish patches: the core is dead black. The wall is of equal thickness from rim to base. The decoration consists of a series of horizontal smooth-floored grooves firmly drawn with a blunt point of wood or bone, extending from below the rim to the bulge. Round the bulge are four pairs of dimples spaced at equal intervals. These are carefully moulded and do not show on the inside.

The urn is undoubtedly of a rare type. Prolonged search through the literature has disclosed one close parallel only, a cinerary found 'in the Winter of 1834-5' in a barrow in the parish of Elworthy, Somerset, on the east slopes of the Brendon Hills, adjoining the coast of the Bristol Channel opposite our group of barrows. This urn is of the same shape and height and has four pairs of dimples; it has similar grooved decoration, somewhat coarser and more varied, with chevron patterns as well as horizontal lines. The record states that 'the burial place contained a circle of upright stones, about six feet in diameter, and three feet high. On one side was a square cavity, about fifteen inches in diameter, enclosed with flat stones, containing this urn, with fragments and ashes of burnt bones. There were also pieces of another urn'.¹³

The Elworthy urn (PLATE IV, C) has features which reveal its affiliations. The paired dimples show a well-marked intervening ridge; such a ridge, at a slightly earlier stage of evolution from a pierced lug, is seen on a bucket-like urn of Rimbury type from Dorset.¹⁴ This

¹³ *Procs. Somerset Arch. and Nat. Hist. Soc.*, 1883, xxix, p. 46. The urn is illustrated in Abercromby, *Bronze Age Pottery*, II, no. 464, and, with the fragment of the other urn, is preserved at Taunton Museum. Mr St. George Gray, in addition to his gift of the photo reproduced in pl. IV, has kindly sent me a drawing of the fragment; it is probably from a lugged or loop-handled urn of Late Bronze Age (southwestern) type.

¹⁴ Abercromby, *B.A.P.*, II, 456 c. The Elworthy urn is included in Mr Christopher Hawkes' 'List of Deverel-Rimbury Urns' in *Antiq. Journ.*, 1933, p. 451. Mr Stuart Piggott kindly informs me that he has obtained from a barrow on Crichel Down near Blandford, an L.B.A. bucket urn with 'just the same very vestigial lugs' as the Six Wells urn shows.

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indication of cultural relationship is rendered certain by another detail of the ornament—the convergence of the horizontal grooves on what we may now call the 'vestigial lugs'. This commonly occurs on globular urns of the Deverel group.¹⁵ Grooved decoration in general and chevron patterns are moreover normal to the Deverel-Rimbury wares and their derivatives.

This analysis will suggest that devolution has proceeded further in the case of our Six Wells urn than at Elworthy. This is to be expected: for there is ample evidence that throughout the prehistoric periods cultural trends were from south to north across the Bristol Channel and not in the opposite direction. Since then, the date of the Deverel-Rimbury irruption into southern Britain can be safely dated at *c.* 750 B.C., the Six Wells urn can hardly be earlier than 600 B.C.¹⁶

The one feature needed to demonstrate the essential identity of this Somerset culture with that at Six Wells is of course the 'ritual pit'. This is supplied in a record of a barrow, also on the Brendon Hills, which was, like our barrows, composed of turf, and which revealed within a 'peristalith' about 10 feet in diameter (a stone circle, C.F.), a hole 2 feet deep and 1½ feet wide containing no human remains.¹⁷

THE BARROW

The Barrow is of the class known as turf barrows. It was thrown up at one time, and presents no feature warranting detailed archaeological description—though its geological character, as my colleague Dr F. J. North shows (Appendix, p. 160), provides interesting data bearing on the sources of its material and on the original condition of the site. There is more pure clay in its structure than in the other turf barrows in its group.¹⁸ A mass of such clay formed the base

¹⁵ e.g. Abercromby, II, 389 c, and 403, both from Dorset. cf. a vessel of somewhat earlier date, from Sussex; *Procs. Prehist. Soc.*, 1935, p. 42.

¹⁶ Flared rims of the Elworthy-Six Wells type are certainly not a normal feature of Deverel-Rimbury urns or their native derivatives in Britain, but examples can be found—e.g. in Dorset, associated with a Deverel-Rimbury urn, Abercromby, op. cit. 400 b. A bucket-shaped urn from a cist at Fowey, Cornwall, illustrated in Hencken, *Cornwall and Scilly*, pl. VIII, 3, and Abercromby, 463, is probably a close relative.

I am much indebted to many friends who have helped me with the problem of the Six Wells urn; Miss Florence Patchett and Mr Christopher Hawkes have kindly provided me with much comparative material, and the investigation has confirmed views expressed by Professor Gordon Childe, Mr Stuart Piggott, and Mr Raleigh Radford.

¹⁷ *Procs. Som. Arch. and Nat. Hist. Soc.*, 1896, XLII, pp. 22-3.

¹⁸ *Antiq. Journ.*, loc. cit., pp. 99 f., 105 f., 119 and pl. XXIX.

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of the mound in an area which included the central deposit (FIG. 7), but which was for the most part confined to the northwestern half of the barrow. Elsewhere the lumps and patches of clay were so interlaced with turfy material and so irregular in their incidence that the distribution of clay cannot be regarded as structurally significant. In general, the regularity of the turfy layers with thin bands of clay on their undersides was striking; after rain one could measure the thickness of these layers (3 to 6 or 8 inches) with ease. The barrow was never constructed as a *turf-stack*; nowhere was a vertical face or a steep slope of turf, seen. In this respect it resembled the other 'ritual barrow' 267' and differed from the two Sheeplays burial-mounds 279' and 293'. Thus the structure tended to fade out at the margins, and determination of its actual limits was difficult. When wet weather had intensified colour-contrasts, and enabled these limits to be fixed, one could not be sure whether they represented the original barrow edge, or a 'spread'¹⁹ subsequent to construction due to a hypothetical instability of the structure. I have assumed the former to be correct (since no means exist of proving the 'spread' or determining its extent), and am probably right in so doing, for the actual limits of the barrow provide a remarkably close approximation to a true circle. The figures are 87.6 feet in NE-SW diameter, and 90.0 feet in NW-SE diameter (see Plan). The centre of the barrow, as of the stake circle, is the 'ritual pit'.

Hard-pan was very much in evidence. It covered practically the whole of the floor of the barrow (in so far as it was excavated) except the central area which has already been described; here, descending steeply, it merged into the orange clay (p. 143 f.). The level 'pavement' of hard-pan usually met with in turf barrows was seldom seen. The floor layer rose in hummocks and then dipped into pits and holes and faded out; thin bands were also seen above and near the ancient surface. Contorted layers of hard-pan, moreover, were found in the body of the mound, in and on the clay masses (as in FIG. 3). Only on the margins of the mound was hard-pan on the floor consistently even. These features are indicated in the Sections, in which however I cannot hope to convey any adequate idea of the fantastic detail of form, let alone colour, produced after some 2500 years in (and under) a well-consolidated dump of turf and clay. 'Straight' photography fails to demonstrate the pattern; the wall of the north-south trench with the

¹⁹ I am of course not concerned with the 'spread' of the mound due to ploughing, which is extensive and measurable, but of no importance.

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clay becoming streaky after rain, and with deep rabbit buries above, is seen in PLATE I, A.

THE STRUCTURE AND THE RITUAL

Mr Christopher Hawkes has stressed the importance of the native influence on the Deverel-Rimbury immigrants and suggests that many features of their ceramic in southern Britain, for which continental parallels are not easily found, should be attributed to the western megalithic culture.²⁰ While, therefore, one may regard such an everted-rim urn as that figured by Abercromby²¹ from Crozon, at the tip of the Brittany peninsula, as a valuable hint as to the proximate continental source of the Elworthy-Six Wells urn-type, we can reasonably regard these vases themselves (of which one was certainly made on the spot, within the Highland Zone) as insular variants. We can be still more definite about the turf and stone-ringed barrows on the Brendon Hills, whose Middle Bronze Age A descent in this country is demonstrable. We are moreover fortunately able to prove that domed pit, turf barrow, and stake circle traditions were many centuries old on the Llantwit Major plateau when our ritual barrow was constructed.²² In short, we are dealing with a foreign fashion in pottery, utilized on both sides of the Bristol Channel in structures of traditional forms.

The Six Wells 271' barrow has it is true, decadent features—the mound is a mere heap and the cist is incompetently built; nevertheless the interesting and important fact stands, that a Bronze Age culture on the sea plain of Glamorgan existed substantially unaltered, in such of its techniques as we can study, for not less than 400 and probably as much as 700 years.

Whether the 'ritual' is of the same antiquity we cannot say; but since traditional structural forms and techniques were used for it without essential modification, it is hardly likely to have been introduced in 700–600 B.C. Let us, then, study this 'ritual', first reminding ourselves of the essentials of the problem.

A small hole containing no artefacts, and which therefore is regarded as a 'ritual pit', was domed over with clay and earth. It was surrounded by a small area wherefrom the ancient surface soil was removed, and

²⁰ Preston and Hawkes, 'Three L.B.A. barrows on the Cloven Way'. *Antiq. Journ.*, 1933, especially pp. 438–9.

²¹ *op. cit.* pl. CVII, no. 21.

²² Domed pit, at Breach Farm barrow, c. 1600 B.C. Turf barrow, and stake circles, Sheeplays 293', c. 1300 B.C.

by a larger area which had not been trodden. This tiny construction was the exact centre of a stake circle 50 feet in diameter, and was almost certainly also the exact centre of a barrow 90 feet in diameter. It was therefore the cause of, and reason for, these constructions.

There was a primary burial in the mound, by cremation, in an urn within a cist, of an adult, probably a male. The cist was so designed as to emphasize its structural relation to the stake circle (with which it was contemporary); it was, however, outside the circle. These are pregnant facts; we receive unexpected and welcome evidence that the stake circle was in effect the precinct wall of a shrine or sanctuary; burial would pollute an area 'occult, withheld, untrod', and could not be permitted. A votary, marginally interred, might however expect favour from the Power to whom the pit was dedicate, or with whom contact was established by libations, food-offerings, or other ritual centred on the pit. Here we reach the core of the problem presented by our Barrow.

It is, in a sense, impossible to penetrate the mind of Bronze Age Man in Britain, and thus, in this particular instance, to know what impelled him to so laborious a creation as barrow 271'; to determine what was the concept behind the ritual; what was the ritual itself which dictated this material form. But there is one European people who were literate, artistic, and introspective, at a time when they still retained a mass of custom and ritual from their Bronze Age past—the Greeks. And it is not difficult to find clues to our problem in their literature and art. 'The chthonic gods', says Philostratos, 'welcome trenches and ceremonies done in the hollow earth'.²³ Pausanias, giving an account of the ceremonies performed at Titane to soothe the winds, states that the priest does secret ceremonies into four pits. 'Each of the four winds', commented Miss Jane Harrison, 'dwelt, it is clear, as a chthonic power in a pit'.²⁴ The same ideas were shared by the Romans: 'when the *mundus* (the round pit on the Palatine) is open, the gate of the doleful underworld gods is open'.²⁵

That the same sort of hole and, like it, domed, was made for a dead man in an adjacent barrow, Sheeplays 293',²⁶ as for the (presumed)

²³ This and the following extracts and comments, are derived from J. E. Harrison, *Prolegomena to the Study of Greek Religion*, 2nd ed., 1908. The present reference is to p. 125.

²⁴ *op. cit.* p. 68. Τίτανη was a town in the Peloponnese (in Sicyonia).

²⁵ Varro: see Harrison, *op. cit.* p. 47.

²⁶ *Antiq. Journ.*, 1941, pl. XIXa.

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ritual acts in our barrow 271', need not surprise us. Ghosts (spirits of the dead), in the evolution of primitive concepts, become gods or goddesses²⁷; the line is hard to draw between them. But that there should be a barrow over a ritual pit, as over a tomb, is harder to understand. It is true that an artificial earth-mound, as representing the home of the earth goddess, commonly occurs in the art of the Greek vase-painter,²⁸ but I think the explanation of our mound lies elsewhere. We may, at this stage in our enquiry, be content to affirm it as probable that the 'ritual pit' in barrow 271' was a vehicle whereby a chthonic Power was approached, consulted or appeased. One may further emphasize the classical parallel by stating that we may have here a barbarous version of the sanctuary with its *τέμενος*; but the classical analogies, though relevant, must not be pressed too far. The peculiar feature of our shrine is its ephemeral character. The care taken over the burial of the adult in the cist shows him to have been a person of importance, not a dedicatory sacrifice,²⁹ and the construction of his tomb was, as we know, contemporary with the construction of the circle. Now it is safe to affirm, on general principles, that definition of a sacred area must either precede or be contemporaneous with, the hallowing of the site; were it later, the risk of pollution by involuntary trespass would arise. Contact with the Power in the pit, then, is likely to have been sought and achieved on the death of the individual in question. Furthermore, the holy place with the *τέμενος* necessarily ceased to function when the barrow was built, and this took place, as has been shown, very quickly after the burial. We observe, then, that a month or so might well cover its actual existence.

All this has a bearing on the fact of the mound. It may provisionally be regarded not as the pure expression of a cult of the underworld Power, but as an intrusion of the principle that a barrow was a covering proper to the dead. The barrow was, however, centred on the shrine, not on the burial.

The floor of barrow 271' may then be not a sacred site of a tribe, but a secular plot of ground whereon priests or shamans, on behalf of an important local family with over-estuary connexions, who had suffered bereavement, performed ritual acts by virtue of which contact

²⁷ Harrison, *op. cit.* p. 240. cf. J. L. Myres' *Who were the Greeks?*, p. 191, para. 3.

²⁸ Harrison, *op. cit.* figs. 68-9, pp. 277-8.

²⁹ We know what a dedicatory sacrifice among the Middle Bronze Age folk in South Wales was like; burnt bones thrown into a stony pit. See *Archaeologia*, LXXXVII, pp. 144-5 (Pond Cairn, Bridgend).

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was obtained with an underworld Power, and a place provided for the ashes of the dead in the shadow of Its presence³⁰.

The issue may now be broadened. The striking and dramatic importance of the lay-out in barrow 271' is that we see the Dead Man ousted from the central and dominant position which we have good reason to believe he held in the earlier (megalithic) religion of the Highland Zone. Whatever authority the man whose sepulture we have studied may have wielded during life, in death he was a suppliant. The concept involved in the worship of the dead is here visibly overthrown.

Lastly, there is one correlation, a by-product of our survey, which invites more precise expression. The record of the Elworthy barrow, reinforced (where information is lacking) by that of the Brendon Hills barrow, suggests the presence, on the other side of the Bristol Channel, of a ritual structure similar in plan to that in our barrow, the urn being deposited in a cist 'on one side of' a circle of stones, as our urn was in a cist marginal to a circle of stakes. This apparent identity of function of sacred structures of stone and of wood has familiar parallels, and it increases the interest of the field of inquiry which is initiated by the excavation of Six Wells 271'.

APPENDIX

GEOLOGICAL FEATURES OF BARROW SIX WELLS 271'

by Dr F. J. NORTH, F.G.S.

The material of the barrow includes four principal types :* (a) turf ; (b) yellowish brown loam and clay representing normal local soil and subsoil ; (c) homogeneous grey clay, and (d) grey clay in patches associated with stony brownish loam—described on page 156 as lumps and patches of clay interlaced with turfy material.

Materials of types (c) and (d) make up most of the core of the mound, the homogeneous grey clay being in greatest abundance towards the north and the patchy grey clay towards the south. These were covered and surrounded by the yellowish brown loamy clay and turf, but apart from this there was no well-defined stratification of the material, except for the regularity of the turf layers themselves.

³⁰ The classical parallel I have adduced has been applied before, but from a different angle, and not to elaborate structures such as Six Wells 267' and 271'. See e.g. Thurnam, *Arch.* xlii, p. 181, with reference to holes under long barrows, and Mr G. M. Young, *ANTIQUITY*, 1934, pp. 459-61, with reference to the circular hollows, miscalled 'Pond Barrows', found adjacent to barrow groups in Wiltshire.

* The methods of examining materials of this description will be described in an appendix to a forthcoming paper, in *Archaeologia*, lxxxix, on another barrow of the group : Sutton 268'.

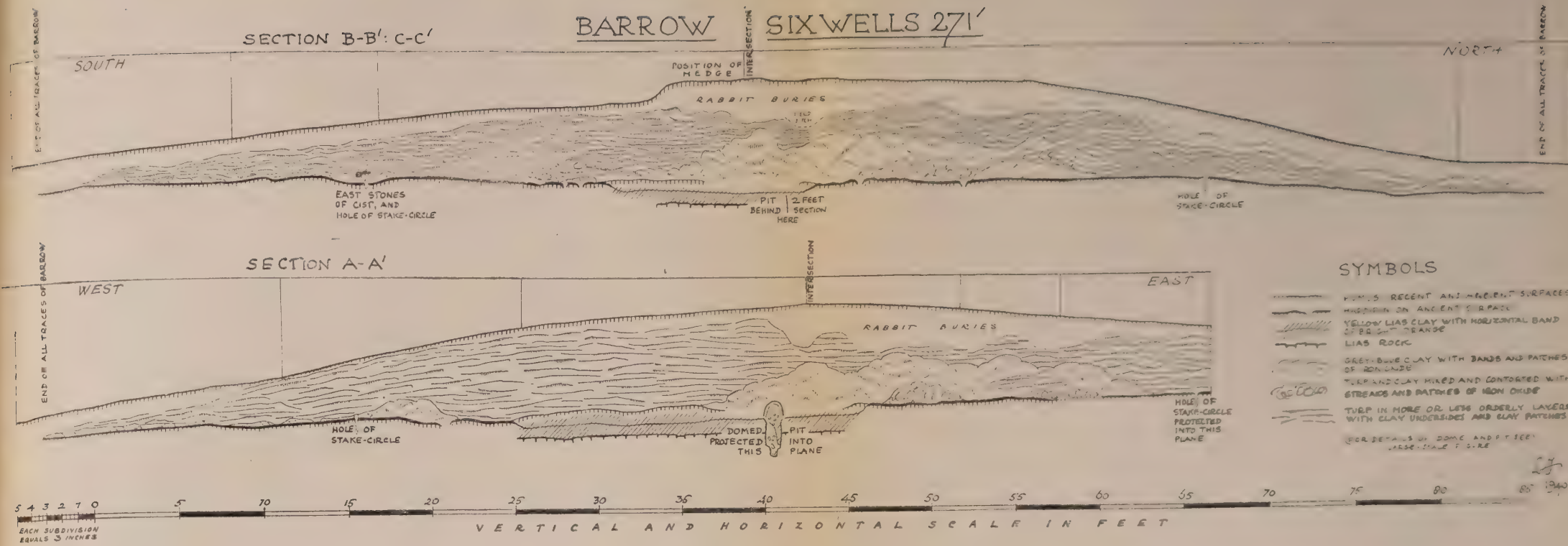


FIG. 7. SECTIONS OF BARROW

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All these materials were obtained from the surface layers of the immediate vicinity, and their distribution indicates that the work was carried out with the least possible amount of transport. The grey clay suggests a deposit from a swampy hollow where sediments accumulated under chemically reducing conditions, and the existence and present conditions of a ditch by the side of the road just northwards of the site (where the lowest ground of the immediate vicinity occurs) sufficiently indicates the reason why this clay is most abundant in the northern part of the barrow. The homogeneous appearance of the grey clay mass is due to the fact that the material was damp and plastic when dug, and was quickly excavated and dumped.

The jumbled character of the mixture of grey clay and stony loam was more apparent than real, for this part of the barrow was made up of masses consisting almost always of a layer of greyish clay below with brownish stony loam above, although in a few instances this order was reversed and the clay was uppermost. As exposed in section each portion of the grey clay formed a sort of shallow basin in which the other material rested (except when the clay was uppermost), and the whole had the appearance of being built up from small pillow-like lumps, nearly all of which had been added to the pile with the grey clay layer downwards ; this layer, being soft and plastic, tended to accommodate itself to the irregularity of the surface upon which it rested. This material was obtained from the margin of the grey clay area, and just southwards of it, where the surface layers included soil and the stones left after some of the finer material of the clay had been washed away by rain or surface waters.

The turf, soil, and loamy subsoil above and around the clayey core differed in no essential way from the material of the normal soil profile in the neighbourhood of the barrow.

The variegated appearance of the material, due to the presence of layers of bright yellow, orange, and reddish brown layers rich in compounds of iron, and sometimes indurated by them, is an indication of the extent to which the soluble mineral constituents of the mound have been re-distributed.

The Beginnings of Civilization in Mesopotamia*

by E. A. SPEISER

University of Pennsylvania

IN attempting an analysis of so composite a problem as the beginnings of civilization in Mesopotamia, I shall treat the subject under three heads : material elements ; social elements ; the underlying ethnic forces.

MATERIAL ELEMENTS

Our knowledge of predynastic, or proto-historic, Mesopotamia is almost entirely a contribution of the present decade. At the Eighteenth International Congress of Orientalists, held in Leiden in 1931, three archaic stages were established for Lower Mesopotamia. They are, working back from recorded dynastic times,

1. The Jemdet Nasr period
2. The Uruk period
3. The Obeid period.

These divisions as they are generally understood, are at once cultural and chronological. They follow in a definite order, without intervening gaps, and each contains certain characteristic material elements which were first observed on the site that has given its name to the culture in question. The beginning of the Early Dynastic period may now be dated to about 3000 B.C.,¹ with a much smaller margin of error than the round date might imply. Since the three predynastic stages

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¹ See H. Frankfort, *Orient. Inst. Comm.* 20 (1936), Comment on the Chronological Table (after pl. VIII). A useful survey of the protohistoric material will be found in Viktor Christian's *Altertumskunde des Zweistromlandes* 1, fasc. 2 (1938), although Christian's dates are at times highly individual. See also Th. J. Meek, in *The Haverford Symposium on Archaeology and the Bible* (1938), 158 ff.

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are represented by a total of nearly twenty building levels,² the time assigned to the age as a whole could scarcely be less than the entire fourth millennium. The chronology is relative, of course, since much of the age under discussion belongs to the preliterate era. But this relative chronology is abundantly established, and is being constantly confirmed, by the collective testimony of a number of widely distributed ancient centres ; so much so that the terms 'Jemdet Nasr', 'Uruk', and 'Obeid' have been adopted for Upper Mesopotamia as well, and they are employed in a restricted sense for other sections of Western Asia, notably Persia, Syria, and Palestine.

Upper Mesopotamia was inhabited long before the alluvial valley of the south had become suitable for human occupation. Whereas the oldest established civilization of Lower Mesopotamia was the one known as 'Obeid', separated by two other cultures from the Early Dynastic stage, ancient Assyria has yielded at least two additional stages :—

4. The Halaf-Samarra period
5. The Sakjegözü, or Neolithic period.

The last-named stage takes us back, even on conservative estimates, well into the fifth millennium.

For our present purposes, the internal characteristics of each of the above five predynastic periods are immaterial. Their distinguishing features may be ascertained from several general summaries³ or, better still, from the original reports on the various excavations in question. Nor need we dwell on the principal accomplishments of the predynastic age as a whole, beyond indicating that the beginnings of building and pottery lie still farther behind,⁴ but that the introduction of metal, the wheel, the cylinder seal, and writing fall within the predynastic age of Mesopotamia. It will be of more immediate concern to us to concentrate instead on correlations of a methodological and general anthropological nature. These correlations will be stated briefly in the succeeding paragraphs.

² e.g. Uruk, archaic II–XVIII.

³ See above, note 1.

⁴ That is to say, they are earlier than the deepest stratified deposits known from Mesopotamia. The stage in question has been reported from J. Garstang's excavations at Jericho, and may be anticipated from his discoveries at Mersin.

In grouping together the Halaf and Samarra deposits I have had in mind only their relative chronology. On contextual grounds Samarra proves to be an early phase of the Obeid-Susa I group.

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A. First there is a question as to the nature of the divisions into which predynastic Mesopotamia has been broken up. The terms currently in use to designate those divisions were first applied to strictly localized remains which enjoyed prominence over a limited period of time. Thus 'Obeid' was applied originally to a highly specialized type of painted pottery which was confined to a section of Lower Mesopotamia, and flourished until the appearance in the same region of pottery without painted designs. Secondarily, the term was applied also to the material context with which Obeid pottery occurred. In this manner one designation served for a characteristic product, a period, and a cultural context. It was adequate so long as the early civilization which it was meant to signify appeared to remain in comparative isolation. But the one conclusion towards which all recent archaeological discoveries and researches in Western Asia converge is that even the oldest civilizations of that area were not narrowly localized. Obeid pottery and terracottas are now known also from Upper Mesopotamia, while Obeid decorative motives have correspondences with designs on pottery of the Amri stage, in the Indus Valley, too intricate to be explained away by mere coincidence. If we extend the term 'Obeid' to cover Upper Mesopotamia, we shall find it awkward and misleading when applied to a substantial residue of northern remains, including pottery, which have no counterpart in the south. In such circumstances the label in question could be justified only for chronological purposes. 'Obeid' would designate a period characterized by a sum of material remains varying in origin and relationship. For a single group of material remains is often insufficient to establish synchronism. The suggested decorative correspondences between Obeid and Amri may point indeed to a common source, but reflect widely separated periods, because the Amri stage is much later than Obeid proper. Careful distinction must be made, therefore, between cultural synchronism and parallels from different periods. The Obeidoid material from the Indus Valley⁵ seems to indicate a late survival from a common source.

B. We come back now to the material contents of the five predynastic stages of Mesopotamia. It has been indicated that in Upper Mesopotamia products from the Obeid province in the south mingled with others which were restricted to the north. For instance, the graceful beakers from Gawra 13 do not occur in Obeid proper. They have,

⁵ I would compare, for example, the motives published by N. G. Majumdar in *Mem. of the Arch. Survey of India* 48 (1934), pl. xxxviii, 1-8 (called to my attention by Dr Marian Welker) with Gawra XIII; see provisionally BASOR 66, 11.

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however, their analogues in the tumblers from Susa i. On the other hand, Gawra and Obeid share a number of designs which do not occur in Susa. Correlation of the remains from the above three areas, Upper and Lower Mesopotamia and Elam, indicates an underlying relationship among the three which is less apparent when only two of these regions are compared. We now see that the treatment of the human figure was the same in all three provinces. The terracotta figurines from contemporary Ur have the same animal heads as the incised figures on the seals from Gawra and the painted figures on the pottery from Susa.⁶ The obvious mastery of the artist over his medium, whether it was clay, stone, or paint, shows clearly that the distortion of the head was intentional. The human representations in question had in each instance a magic significance. The correspondence between the respective cultures embraces thus art and religion as well as industry. There is here a deeper unity that outweighs existing material differences. But these differences cannot be ignored.⁷ At Gawra, for example, the designs on the pottery of the Obeid period point in many directions. There are here survivals from earlier stages (Halaf-Samarra); elements paralleled in the south, and others which betray yet another source.⁸ The picture of a larger civilization covering a wide area is thus modified constantly by sectional peculiarities arising from differences of physical background and from local traditions and contacts. It is an ever-changing picture of expansion, interaction, and modification. In each period there is a similarity of outline, but the component elements may be heterogeneous.

c. With the realization that each age was culturally composite we begin to appreciate the danger of making this or that manifestation of the period characteristic of the entire stage. It is known, for instance, that the introduction of the cylinder seal and the consequent emergence of writing took place towards the end of Uruk times.⁹ Does this mean

⁶ For the figurines from Ur see L. Legrain, *Gazette des Beaux-Arts* Oct., 1932, p. 142; for Gawra there are stamp seals from Levels xi (post-Obeid) and xiii which show an analogous treatment of the human figure with similar distortion of the head; for Susa, cf. E. Pottier, *Mém. de la Délég. en Perse* 13 (1912), fig. 129.

⁷ For the differences between north and south which were apparent before the discovery of Gawra xiii see M. E. L. Mallowan's summary in *Excavations at Tell Arpachiyah* (1935), 70.

⁸ BASOR 66, 12.

⁹ A. Falkenstein, *Archaische Texte aus Uruk* (1936), 3. Although Uruk ivb may be assigned on internal grounds to the Jemdet Nasr period, the required stage of transition from cylinder seal to tablet makes it necessary to put the process back to the end of Uruk times.

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that the inventors of the cylinder seal were necessarily the authors of the Uruk civilization? By no means. The Uruk stage has disclosed internal differences of sufficient magnitude to call for a subdivision into Uruk A and Uruk B.¹⁰ It is therefore inherently improbable that the people of Uruk A were alone responsible for the innovations that mark Uruk B. These innovations argue, rather, the arrival of a new ethnic element. It should be noted in passing, however, that the ethnic factor is not automatically instrumental in bringing about a complete change in an established civilization. For Uruk A is not eliminated with the appearance of Uruk B. Similar co-existence of disparate cultural features, which point conclusively to more than one source, is especially noticeable in the Jemdet Nasr period.

D. We see then that the predynastic periods represent units only in a wide sense. Nor is the line of demarcation between two given periods clear and sharp. There is an appreciable overlap of Halaf and Obeid, Obeid and Uruk, and Uruk and Jemdet Nasr. This overlap imparts a flexible character even to chronological boundaries. The fact is thus emphasized that from the very beginning cultural continuity had a significant part in the shaping of Mesopotamian civilizations. New periods may have been due to combinations of economic and ethnic forces, but vital achievements of a preceding stage were also assimilated and continued. In the light of these facts early civilizations may be defined as totals of integrated cultural elements which reach their peak in time and converge in space towards a central core. There are no sharp chronological or geographical boundaries. This definition enables us to contrast adequately such successive stages as Obeid and Uruk, as well as contemporary civilizations like those of Mesopotamia and Egypt of, say, Jemdet Nasr times. When contemporary civilizations are thus contrasted, the surprising result is not that there are palpable differences between them, but rather that the respective levels of the civilizations compared are essentially similar, provided that inter-communication between them existed. Predynastic Egypt and Mesopotamia differ materially as to contents. But the tempo of progress shows no corresponding disparity. Qualitative similarities alone, as opposed to contextual relationship, cannot always be explained by the all too easy recourse to invasions. Their cause must be sought in a force of a different nature. That force is diffusion.

E. It is surely no mere coincidence that predynastic times come to an end both in Egypt and Mesopotamia at about the same period ;

¹⁰ 4. *Vorl. Bericht, Uruk* (1932), 44.

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that metal is worked in both countries in very early settlements and that metallurgical advance shows a similar rate of progress in the valleys of the Two Rivers and the Nile ; or that cylinder seals link distant areas in Jemdet Nasr times.¹¹ Diffusion presupposes, of course, physical contact, but the mechanism of diffusion functions freely in times of peace. The need of raw materials, such as obsidian and copper, stimulated commerce, and the barter of goods had as its inevitable corollary the interchange of ideas. Since there were commercial links between early Egypt and Mesopotamia, news of progress in non-negotiable items was also communicated from one region to the other.¹² In view of this it is naive to assume, as has actually been done, that plain pottery was invented in Jericho, or that painted wares originated at Tell Halaf. In most cases, the source of a significant invention is lost to us entirely. At best, we may be able to trace a specialized invention to a given area, but hardly to a single site. We have reason to say that the potter's wheel is of Asiatic origin and that the cylinder seal is Mesopotamian. But we cannot prove that the cylinder seal was invented in Uruk, merely by pointing to the fact that the earliest known cylinders have been dug up at Uruk. Such items spread much too quickly to betray to us, thousands of years later, not only the civilization that produced them but also the very spot where they originated.

The spread of the knowledge of metals is a case in point. The collective testimony of a number of sites shows that copper was rare in

¹¹ See H. Frankfort, *Cylinder Seals* (1939), 224 ff.

¹² The origin of Egyptian writing can scarcely be viewed in any other light. Its ultimate, though indirect, dependence on Mesopotamian writing is indicated by the following considerations. There are hundreds of Mesopotamian tablets from predynastic times as against the single possible instance of the Lion Hunt palette in Egypt with its two written symbols. (On this subject see H. Ranke, *Heid. Ak. Wiss.*, 1924-25, 3 Abh.). According to Siegfried Schott (in Kurt Sethe's *Vom Bilde zum Buchstaben* [1939] 82) there is nothing in the Egyptian system of writing that points to a long period of development, whereas the evolution of Mesopotamian writing is abundantly illustrated from its very beginning. Moreover, the cylinder seal (admittedly of Mesopotamian origin) provides the link between picture and script ; and Mesopotamian economy (which differs markedly from Egyptian economy in historic times) furnishes an all but automatic explanation for transforming elements of design into elements of script (Falkenstein, *op. cit.* 32-3, 47). Finally, there is ample evidence of contacts between Mesopotamia and Egypt at the time of the evolution of Mesopotamian writing (A. Scharff, *Zeit. f. äg. Spr.* 71.89 ff.) But all this indicates no more than that the idea of writing was borrowed by Egypt (for this possibility see Schott, *op. cit.* 81). In form, the two scripts are strictly independent. Both are based on native artistic elements and the derivative scripts are as different as the respective art styles of Mesopotamia and Egypt.

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the early phases of the Obeid period, increasing gradually in use until the technique of metallurgy is mastered by Jemdet Nasr times. The art of working copper could not have been discovered on the sites where the metal is first encountered for the simple reason that those sites are not close to copper deposits. It must have been introduced from the outside. Once discovered, however, that art spread rapidly throughout the civilized world, to all areas which maintained contact with one another. The same is true of many subsequent stages of metallurgical progress. The underlying principle of diffusion enables us now to utilize those technological stages as so many chronological criteria. It follows that Susa I or Ghassûl, with their relatively high copper technique, cannot be as old as the Halaf period, in which knowledge of metals can scarcely be said to exist at all.¹³

It goes without saying that the still useful terms 'Neolithic' and 'Chalcolithic' presuppose, at least to a certain extent, the chronological application of the principle of diffusion. But we should bear in mind that incidental factors attendant upon diffusion must not be ignored. Not all goods popular with one civilization were welcomed necessarily by a neighbouring culture. Moreover, synchronisms furnished through diffusion have to be corrected in accordance with the lag involved in each instance,¹⁴ and that requires clear evidence as to the respective centres of the elements diffused. In questions of this sort in particular much work remains to be done.

F. So far we have been preoccupied in the main with the dynamics of proto-historic civilizations. With the above remarks in mind, we may now sum up briefly the external characteristics of the predynastic periods of Mesopotamia. The beginning is represented in Gawra 26 and Nineveh I by a Neolithic occupation which is paralleled in Judeideh 14, in northern Syria. It is not the absolute beginning of settled life, because the introduction of building and pottery had already been left behind. The first settlements of Mesopotamia were due, therefore, to outsiders.¹⁵ The succeeding Halaf period is given over to an advanced civilization with technically developed polychrome fabrics, terracotta

¹³ cf. *Journ. American Oriental Society*, 1938, LVIII, 672-3.

¹⁴ A considerable time lag is involved, for example, in the spread of the 'chalice ware' from Central Persia to the Nineveh area. On the other hand, the diffusion of the cylinder from Lower Mesopotamia required comparatively little time to reach Elam and Syria.

¹⁵ On the possible western origin of these outsiders further information may be expected from Garstang's excavations at Mersin.

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figurines, amulets, and the first stamp seals.¹⁶ Halaf has its centre of concentration in northern Syria and its settlements do not extend beyond the Tigris. Along that boundary it is met by an eastern culture, whose early manifestations known as Samarra coincide with the end of the Halaf period. Compromises between the two cultures are demonstrable along the line of contact, but the river barrier is not crossed far in either direction, except by scattered importations. Later phases of the eastern culture occupy the Obeid-Susa period. Metal-work is introduced and, in the north, temple architecture flourishes. The synthesized heritage of the Samarra-Obeid-Susa age is assimilated and gradually transformed in the succeeding Uruk stage, under repeated outside influences which result at length in the cultural separation of the north from the south.¹⁷ Henceforward the two provinces pursue divergent courses, although lively intercourse tends to level existing differences. The end of the Uruk period witnesses in the south the introduction of the cylinder seal and script. The period comes to an end with the arrival of a new type of painted pottery, probably from the west,¹⁸ and this pottery typifies externally the following Jemdet Nasr stage. Industry and commerce contribute to the growing wealth of Sumer, which trades now with the rest of Western Asia and with Egypt. Links with Elam are especially close, and the influence of the south is now felt in Upper Mesopotamia. Out of this syncretistic culture there emerges presently the historic civilization of Sumer, which is to leave a permanent mark not only on the rest of Mesopotamia and Western Asia but indirectly also on the classical world and the world of today.

SOCIAL ELEMENTS

The earliest civilizations of Mesopotamia have to be judged entirely by their material remains. Light on social developments is scanty and incidental. It is reflected by such products as religious architecture,

¹⁶ Gawra has yielded a charred impression of a stamp seal with an excellent design of an ibex, clearly datable to Halaf times. On the problematical date of the cylinder from Chagar Bazar (*Iraq* 3, pl. 1, 5) see Frankfort, *Cylinder Seals* 228.

¹⁷ Gawra XI-VIII must be treated as a separate culture province in spite of the links with Uruk VI-IV, which testify to the chronological relationship of the two areas. Von Soden has proposed the term 'Gawra culture' for the northern province (*Der alte Orient* 37 1-2, p. 9), but his archaeological interpretation of the culture in question is wholly inadequate.

¹⁸ I am referring here only to the polychrome geometric decoration of the period. For the naturalistic elements, as represented in the later Diyala ware, the source must be sought in the Susa II group, to use Frankfort's definition of it. (*Archaeology and the Sumerian Problem* [1932] 69).

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votive objects, and burial customs. Definite information on social conditions and social organization can be furnished only by epigraphic sources, and the earliest records known until recently represent the dynastic levels of Mesopotamia. Today we are able to extend our investigation to predynastic times and reach through the Jemdet Nasr stage to the last phase of the Uruk period. The results are illuminating indeed.

It has been known for a long time that the Sumerians had left an indelible impression on succeeding civilizations. Their influence came to be felt in language and literature, law and government, religion, education, and science. Material influence is attested by numerous Sumerian loanwords in Akkadian, some of which were taken over by later Semitic dialects. Elamites and Persians, Hurrians, Hittites, and Urarteans, Phoenicians and Hebrews, all were among the direct or indirect heirs of Sumerian civilization. These facts have long been familiar. What is less common is the realization that the civilizing activity of the Sumerians had begun in proto-historic times; that the chief beneficiary of that activity was the social side of civilization; and that as a result of that activity the whole of Western Asia was to become a cultural unit, for all its heterogeneous and polyglot components which were to pass in review in the course of millennia. So strong was the assimilatory effect of the framework which the Sumerians had left, that the Semites and non-Semites who were caught in it came to have more in common than did the Semites and the Egyptians, in spite of the linguistic ties that bound the two latter groups.¹⁹

Space will not permit to furnish detailed support for these assertions. Only the general line of reasoning can be indicated at present. It starts with the emergence of writing at the end of the Uruk period.

Adam Falkenstein has demonstrated²⁰ that the earliest written records found in Sumer represent the absolute beginning of that script. Its direct predecessor was the cylinder seal, since many figures which occur on the oldest seals appear also on the earliest tablets. Writing first served the purposes of temple economy, with private business turning to the new medium shortly afterwards. Historical and literary compositions are the result of subsequent development. From the

¹⁹ Hence the many close ties between the Hurrians and the Hebrews as against the less substantial cultural connexion between the Hebrews and the neighbouring Egyptians. The traditional opposition of the Hebrews to the Egyptians may indeed be viewed in the same light.

²⁰ *Archaische Texte aus Uruk.*

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very beginning, however, lists of signs are compiled as a guide to the scribe and the reader. Now the cylinder seal is admittedly of Mesopotamian origin, hence the derivative script bespeaks the same source; this conclusion is born out by independent considerations.²¹ Finally, the language used in the texts of the Jemdet Nasr period is demonstrably Sumerian. Since the first tablets are only slightly older, and since they are all but identical with those of the Jemdet Nasr age, they can scarcely represent any other language. The introduction of writing was therefore the work of the Sumerians.

Let us now carry this demonstration to its logical conclusion. Writing was not a deliberate invention, but the incidental by-product of a strong sense of private property, always a characteristic of classical Sumerian civilization. The cylinder seal was a device to identify owners of goods, presented to the temple or the object of private transactions, and the first tablets merely implements the operation of temple economy. The same respect for private property is reflected in the records of purchases made by later rulers of Sumer and Akkad;²² it is epitomised in the fundamental tenet of the Code of Hammurabi that a purchase not accompanied by a written document is a theft punishable by death;²³ and it is exhaustively illustrated by the tens of thousands of business documents recovered from the archives of ancient Mesopotamia.

Sumerian government and governmental economy reveal the same basic orientation. The Sumerian city state represents a commercial theocracy in which private enterprise had an important place. The pronounced legalistic order finds its expression in collections of laws which are to become paradigmatic for Babylonia, Assyria, Anatolia, and Palestine, and are implicit in the legal documents of the Elamites, the Kassites, and the Hurrians. The legal framework is transplanted by means of the cuneiform writing,²⁴ itself an early offshoot of Sumerian economy. Inevitably, religious and literary elements are transmitted with the legal ideas. Sumero-Akkadian deities are given a place in the

²¹ Based on the inner evidence of the script; cf. *ibid.* 25-6. For the bearing of the cylinder seals see also Frankfort, *Cylinder Seals* I.

²² cf. e.g. Urukagina, Cones B and C, cols. XI-XII (See now the article of B.A. van Proosdij in the Koschaker Festschrift [*Studia et Documenta* II; Leiden, 1939] 235 ff.)

²³ §7; cf. M. Schoor, *Vorderasiatische Bibliothek* 5 (1913) XIII.

²⁴ It is worthy of notice that the Hurrian and Hittite syllabaries rest on a prototype which antedates the Dynasty of Hammurabi; cf. JAOS 58, 189, note 68.

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Hurrian pantheon,²⁵ and the Epic of Gilgamesh is translated into Hurrian and Hittite. In this manner, Sumerian writing, bearing the fruits of Sumerian civilization, pervades the whole of Western Asia, thus achieving a more lasting and far-reaching effect than the most extensive conquests of Mesopotamian emperors. Babylonian kings struggle to phrase their accounts in a language already dead.²⁶ Remote Ugarit uses that language in its vocabularies. Ashurbanipal boasts of his ability to read inscriptions in the 'obscure Sumerian',²⁷ and Achaemenian kings employ formulaic phrases which echo statements by Sumerian rulers. But it is always the law, the *torah* in the language of a culturally related centre, that governs human conduct and safeguards human progress.

This sketch is not intended to minimize non-Sumerian contributions to the civilization of Western Asia. But too much emphasis cannot be placed on the original Sumerian nucleus. In the course of millennia it was modified, improved, and adjusted to various local requirements. Notable additions to it were made. But the basic legal, administrative, and scientific elements can be traced to the early days of the emergence and evolution of writing. Those elements remain operative as late as Persian and classical times.

The one section of the ancient East that was not involved in this course of social progress was Egypt. The determining factor may be traced to the secondary position of the law in the Egyptian social order. This position was determined in turn by a radically different concept of the rights of the individual. The king was here the supreme judge and the ultimate master of all he surveyed. His was an authoritarian state that knew no higher power. Hence Egyptian government and Egyptian law follow a pattern of their own, and that pattern is not upset until Assyrian and Persian conquests have drawn Egypt into the orbit of the West Asiatic civilization.

THE UNDERLYING ETHNIC ELEMENTS

It is evident from our consideration of the material remains left by the early inhabitants of Mesopotamia that many ethnic elements contributed to the final product which is handed over to the people

²⁵ See A. Götze, *Kleinasiens* (1933) 125.

²⁶ cf. A. Poebel, *AfO* 9 (1933-4), 250-1. The influence of Sumerian on the 'classical' dialect of Hammurabi Akkadian is stronger than is generally recognized. A good illustration is furnished by the *t*-form of Akkadian as interpreted by Goetze, *JAOS* 56, 333. ²⁷ cf. B. Meissner, *Babylonien und Assyrien* 2, 328.

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of the Early Dynastic times. Common survivals, cross-fertilization, and diffusion may have contributed to the levelling of such cultures as those of the Halaf and Obeid periods; but geographical differences alone would have been sufficient to differentiate in course of time the underlying ethnic groups.²⁸ Subsequent changes in the course of the Uruk period herald the arrival of fresh ethnic elements, and the same is true of the Jemdet Nasr period. That a degree of continuity is preserved, nevertheless, is due mainly to the way in which early civilization advanced. Fresh arrivals may have aided in the progress of the invaded areas. They were in a position to improve, but could not entirely obliterate, the cumulative and synthesized heritage of the past.

To identify the individual ethnic elements which co-operated in producing the civilization of preliterate Mesopotamia is a more hopeless task today than it ever appeared to be. It did not seem nearly as difficult before we found out that the culture of each period was a composite fabric. Furthermore, physical anthropology held out the hope that the racial strains might be disentangled. But this promise has not been fulfilled. In fact, the available anthropometric evidence is less conclusive in this respect than the circumstantial evidence from material remains.²⁹ The process of racial levelling is immeasurably older than that of cultural blending. The latter process did not succeed in obliterating all heterogeneous elements, and the chronological testimony of stratigraphy enables us to recognize an intrusive group even where the skeletal evidence may be non-committal.

When we work back from historic times, we encounter the Sumerians at the end of the Uruk period. The question that comes up next is whether the Sumerians had been in the land from the time of the earliest settlements, or arrived in any one of the succeeding stages. This question is not a new one. There is, however, new evidence that bids fair to bring it nearer to a satisfactory solution. Only a bare outline of the relevant facts can be given at this time.

The arrival of the Sumerians at the beginning of the Obeid period has been advocated most energetically by Frankfort.³⁰ He bases his conclusion on the argument from continuity, although he is aware that

²⁸ Note, e.g. the individualizing elements in Susa I, the Nineveh area, and Lower Mesopotamia in Obeid times which tend to break down the underlying cultural relationship of these three regions.

²⁹ See the monograph of W. M. Krogman in *Or. Inst. Pub.* xxx (1937), 213-85

³⁰ *Archaeology and the Sumerian Problem* 40 ff.

the continuity which he seeks to establish is broken in many significant points. Mesopotamian pottery, for example, is kaleidoscopic in its succession of distinctive families.

Not to repeat the arguments for a later arrival of the Sumerians which I have given in full on other occasions,³¹ I shall make only the following additions. The Sumerians are definitely in Lower Mesopotamia in the latter half of the Uruk period, when the cylinder seals and writing first appear. Now Uruk B is characterized also by significant changes in pottery and architecture and the appearance of a pronounced naturalistic style in sculpture, a style which dominates, furthermore, the contemporary glyptic art. Now these changes, and particularly the abandonment of the earlier stamp seal, are radical enough to betray the intrusion of a forceful and heterogeneous ethnic group. The most logical candidates for that event are the Sumerians.

But we can go further than that. Now that Lower Mesopotamia is matched and exceeded in antiquity by the north, we have there a reliable contemporary witness. If the Obeid period in Lower Mesopotamia was of Sumerian origin, then its northern counterpart must have been Sumerian, too. And yet there is nothing in the mass of contemporary material from Gawra and Arpachiyah that might foreshadow the typically Sumerian products of a later date. The human representations of the period are unlike anything achieved by the Sumerians. Most important of all are the seals, of which we have now a large collection. Not only are the northern seals of the Obeid period stamps and not cylinders, but their style is also radically different from the style of the second phase of Uruk. It is linear and schematized, not full-bodied and naturalistic.³² Naturalistic style, cylinder seals, and writing are unmistakable witnesses of Sumerian occupation. None of these witnesses appears in the north before Jemdet Nasr times, when the earlier direction of cultural diffusion from north to south is reversed. In short, Sumerian presence is not felt in the north in any of the periods prior to Jemdet Nasr. Since there was a close relationship between north and south in Obeid times, the Sumerians cannot have been the

³¹ AJA 37 (1933), 459 ff.

³² The stamp seals from Gawra VII-VIII, published in my *Excavations at Tepe Gawra I* (1935), pls. LVI-VIII, can now be supplemented by a large number of seals and impressions from the earlier levels. Their cumulative evidence is to the effect that nothing comparable in style to the seals from Uruk IV and later is present at Gawra until the very end of the Uruk period. In other words, the glyptic style that is characteristic of the Sumerians does not begin to affect the north until the Sumerians had demonstrable contacts with the south.

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authors of that age. Other cultures flourished before their arrival, and it is to those cultures, as we have seen, that the country owed a degree of continuity.³³ All signs point, therefore, to the arrival of the Sumerians in the course of the Uruk period, and no real difficulty is occasioned by this assumption.

It follows that the foundations of the historic civilization of Mesopotamia were laid in Uruk times. The next stage was one of intensive co-ordination and readjustment. Increasing wealth brought in new elements, specifically from Elam and the west. But the Sumerian framework had been established and was gaining strength. Presently it was ready for emergence into the Early Dynastic order and the full light of history.

³³ Frankfort's argument that the Sumerians were 'the earliest occupants of the valley of the Two Rivers' rests on the premise 'that the continuity in the material culture of Mesopotamia may best be understood as based on a similar ethnic continuity which, in view of the later stages of the development, we have to call from the very beginning Sumerian' (*op. cit.* 46). The first part of this proposition is self-evident; ethnic survivals as transmitters of material accomplishments may safely be assumed from the beginning of chalcolithic times at least. But the conclusion does not follow at all. One could say with equal right that the Hurrians of the Kirkuk area were its original population because the texts of the second millennium use the script and reflect many legal and administrative ideas of the preceding millennium. What is characteristically Sumerian in Lower Mesopotamia turns out to strain the normal continuity instead of maintaining it. The underlying influences are eccentric rather than concentric. The Sumerians were later arrivals, therefore, who injected new and vital elements into the inherited civilization.

Place-names and Early Maps

(with special reference to Wales)

by F. J. NORTH

THE significance of early maps in the elucidation of place-name problems is generally recognized, but the converse also applies; for place-names have their value in the study of early maps—in attempts to discover the sources of information used by the compiler of a map, or to determine the authorship of an anonymous map, as well as in problems concerning the relationship between maps of the same area.

The presence or absence of certain names has often been cited as evidence in discussions of this kind, but during the course of work upon early maps of Wales it became apparent that the *forms* of the names sometimes yielded evidence of greater diagnostic value than that relating simply to their inclusion or their distribution.

In times past spellings were less standardized than they are now; the 16th-century topographer, Leland, for example, managed to include in his records at least seven different renderings of the name of the river which in English is called Usk, and in Welsh Wysg—*Wisch*, *Wisk*, *Wiske*, *Wske*, *Wyske*, *Wysc* and *Whisk*.* This might, on first thoughts, be considered a reason for suggesting that the spellings of place-names on early maps and in early topographical works can have no value in critical studies, but Leland's treatment of Usk is an extreme case, and it will often be found that the variations fall into well-defined groups. For example, in 16th-century maps there are at least seven renderings of Haverfordwest in Pembrokeshire,—*Arford*, *Arforde*, *Harford*, *Herford West*, *Herefordwest*, *Haverford West*, and *Hauerfordium* and in attempting to discover relationships it is clear that while *Herefordwest* might have been derived from *Herford West* or *vice versa*, *Arford* cannot have been transmuted into *Haverfordwest*. Similarly, common influence may be looked for in maps that give *Gallon* or *Gellon*

* It should be noted that although these forms differ so much in appearance, all but the first of them sound nearly alike when spoken; six are phonetically close to the Welsh form than is the English *Usk*.

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for Llangollen, but not between maps that give those forms, and others that give *Langollyon* or *Langothlan*.

The results of investigation along these lines are well illustrated by reference to Llandovery in Carmarthenshire. On two 16th-century maps, closely related in point of time and issued in the same volume—the British Isles, and Humphrey Lhuyd's England and Wales in the first supplement (1573) to the Ortelius Atlas, *Theatrum orbis terrarum*—this Welsh town appears as *Tlauanteuery* and as *Ymohyfri* respectively, and apart from the evidence provided by their positions on the maps no one could be blamed for assuming that the names related to two different and otherwise unknown places.

Other renderings of Llandovery (arranged in chronological order) include :—

Landury, 14th-century 'Gough' map of Britain (Bodleian Library).

Lāduri, anonymous (manuscript) map of Great Britain and Ireland of about 1534, in the Cotton Collection in the British Museum.

<i>Llanameueri</i>	}	Leland's <i>Itinerary</i> (c. 1536).
<i>Llanamevery</i>		
<i>Llanandeuery</i>		

Llancanery (Stowe's transcript of Leland's *Itinerary*).

Landuri, map of England and Wales attributed to George Lily (1546).

Tlauanteuery, Mercator's map of the British Isles (1564).

Tlaua-nte-uery, map of the British Isles in the Ortelius Atlas of 1570.

L. Ymdhyfry, Humphrey Lhuyd's map of Wales (1573).

Ymohyfri, Humphrey Lhuyd's map of England and Wales (1573).

Llanymthefry, Saxton's map of the counties of central Wales (1578).

Llanymtheuery, Saxton's map of England and Wales (1579).

Llanymtheuerye, Saxton's large map of England and Wales (1583).

Ymohifri, map of England and Wales, after H. Lhuyd in J. Bussermercher's European Atlas (1592).

Llanymthefry, map of South Wales and the southwest of England in Mercator's Atlas (1595).

Llanymtheueri, map of England and Wales in the same atlas.

Tlauauery, Gerard de Jode's Atlas (1593).

The present Welsh form is *Llanymddyfri* (Llan ym ddyfri), which means the church in or among the waters and might be taken as referring to the position of the town between the river Towy and its tributaries, Bran and Gwydderig. The name was, however, originally

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Llan am ddyfri, the church on the waters, and it related not to the town of Llandovery (there is no church in the town itself and no parish of Llandovery) but was an alternative name for the church of Llandin-gat (dedicated to S. Dingad) a little to the south, which was formerly on the banks of the Towy, although the river now flows some distance away to the west.¹

Humphrey Lhuyd's version, *L. Ymdhyfry*, was evidently based upon a proper understanding of the Welsh form, for Lhuyd, like some of his contemporaries used *dh* as the equivalent of *dd*,² which is pronounced like the *th* in *tether*, not as in *thin*, and *Ymohyfry*, which occurs on his map of England and Wales, illustrates the kind of mistake which was introduced when maps were copied by people unfamiliar with the language of the country concerned. Lhuyd generally used the letter *L* as a contraction for *Llan*, and the engraver frequently left it out. In the case of his map of England and Wales not only was the *L* of *L. Ymdhyfry* omitted, but the *d* was made into an *o*, and the name thus effectively disguised.

Leland's rendering, *Llanandeuery*, relates to the earlier form of the name, and represents an attempt on the part of one unfamiliar with the Welsh language to write a name given by word of mouth (the written *u* was intended to be pronounced as *v*), and his *Llanameueri* results from the careless omission of a 'd', a mistake which led him to make one much more serious, viz., that of implying that the town was named after the brook (Bawddwr) that flows through it, which brook he accordingly called *Euery* (= *Eferi*) *Brook*. *Llancanery* in Stowe's transcript of the 'Itinerary' is without significance, being the result of unintelligent copying.

Mercator's *Tlauanteuery* (1564) could be a mistaken rendering of Leland's form, for one has only to examine manuscripts and maps of the period to see how easily *Ll* might be miscopied *Tl*, and the general assemblage of names on Mercator's map suggests Leland influence, but it may be the result of an attempt to represent the sound of the spoken *Ll*. The chances that either is the case are about equal, because this is the only name so treated—all the other *Llan*-places in Wales on Mercator's 1564 map begin with a single *L*.

When Mercator's map was used as the basis of the British Isles in the Ortelius Atlas of 1570, the word was broken up into three syllables

¹ See notes by the late Egerton Phillimore in *The Description of Penbrokshire*, by George Owen of Henllys, *Cymmrodorion Record Series*, London, 1891, p. 207.

² Information from my colleague Mr Francis G. Payne.

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Tlaua-nte-uery, of which the first and last were on one side of a river and the middle one on the other. In the corresponding map in the Gerard de Jode Atlas of 1593, the name lost its middle portion and became *Tlauauery*, which, in the absence of any connecting links, would never be associated with Llandovery.

Saxton's *Llanymthefry* is obviously a fairly successful attempt to reproduce the Welsh form of the name, for the 'dd' of *Llanymddyfri* is, as already indicated, pronounced like 'th' in *tether*, and if the 'th' in *Llanymthefry* is similarly pronounced, the Welsh form is recognizably imitated. We know that Saxton travelled personally in Wales, and that he had letters from the Privy Council instructing the mayors in the Principality to give him every facility, and, when he left any town, to provide him with a 'horseman that can speke both Welshe and Englishe, to safe conduct him to the next market towne'.³

Saxton's *Llanymtheury* suggests that one of his informants was familiar with the writings of Leland, or that he was familiar with Mercator's map of 1564, and tried to improve upon its *Tlauanteuery*.

The outlines of Wales in the Mercator maps of 1595 were obviously based upon those of Saxton,⁴ and the rendering of Llandovery as *Llanymthefry* on one of the maps, and as *Llanymtheurei* on another, suggests that the continental publisher used Saxton's county maps in the preparation of his larger maps, i.e. those in which England and Wales occupied four sheets, and one or both of Saxton's general maps of England and Wales (1579 and 1583) in the preparation of his single sheet map of Britain (1595).

Although the Welsh form is *Llan ym ddyfri*, the usual English rendering and pronunciation is *Llandovery* (in colloquial Welsh, *Llandyfri*), and it would seem that the name has been so pronounced for many hundreds of years, for the Gough map gives it as *Landury* (=Landvry). This form also appears in the anonymous map of 1534, where it is given as *Lāduri*, and on the Lily map, where it appears as *Landuri*. From this it would seem that the makers of these two maps derived some, at least, of their names from the Gough map or one related to it, and in respect of this particular name owed nothing to Leland or any map based upon his work.

A connexion between these two maps is also suggested by the fact that not only do they give similar forms for the name Llandovery,

³ Acts of the Privy Council, 1575-7.

⁴ F. J. North, 'The Map of Wales before 1600 A.D.' *Archaeologia Cambrensis*, vol. xc, 1935, also issued as a publication of the National Museum of Wales.

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but on each of them the town is wrongly and similarly misplaced, being indicated as upon the Usk instead of upon the Towy. It is hardly likely that such a mistake should have arisen independently twice within a few years, so that although Edward Lynam has shown that, taken as a whole, the Lily map cannot be regarded as a copy of the anonymous one of 1534,⁵ the small but significant resemblance to which attention is here drawn suggests that the compiler of each map derived some of his information from a copy of the Gough map, with which each has affinities in respect of the general outlines. This view receives support in the fact that the 1534 map and the Lily map, alone among known contemporary or earlier maps, give *Crykky* for the Caernarvonshire town of Criccieth: other early maps give *Cricky*, or a variant of *Cryketh*.

Another curious mistake suggests that the 'Lily' map, or one of its numerous versions, was among those consulted during the preparation of Mercator's 1564 map of the British Isles. This map gives *Month flu* as the name of the river on which Caernarvon stands, while on the 'Lily' map it is *Moith f*. No other map or topographical description contains such a name, and there is no historical evidence that it was ever used for the river Seint, which flows past Caernarvon.

On the 'Lily' map, the river called *Moith f* extends from Caernarvon much further south than *Crykky*, and is thus made to flow through the commote of Euionyth or Euionith. Now a written *Euionith* might easily be copied as *Monith*, and recopied as *Month*, or *Moith*, and it would be equally easy for Euionith, the name of a district, to be mistaken for the name of a river, which would thus acquire a name that did not belong to it. If, then, on a later map (e.g. Mercator's) the river was more correctly indicated as a shorter stream, the name would naturally be moved northwards to accompany it. It is more likely that the mistake was a progressive development on related maps, as here suggested, than that it arose spontaneously twice in less than twenty years.

The study of variations that arise from ignorant or careless copying may help in solving problems of chronology. Two maps by Humphrey Lhuyd appeared in the 1573 supplement to the Ortelius atlas—a map of Wales and a map of England and Wales. A letter written by Lhuyd

⁵ 'Reproduction of the "Lily" Map, with a memoir by Edward Lynam'. G. H. Bean Library, Jenkintown, Penna, U.S.A., see also 'The Map of Wales', in *Archaeologia Cambrensis*, 1935, xc, and R. A. Pelham, on 'The Erroneous Position of Llandovery on Sixteenth century Maps', *Archaeologia Cambrensis*, 1932, LXXXVII, pp. 194-9.

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shows that the manuscript of the map of Wales was completed in 1568,⁶ but it is not clear whether the draft for England and Wales was sent at the same time or shortly afterwards. An examination of the names, however, shows that if one of the maps was consulted during the engraving of the other, the Welsh map was the first to be drawn, because on the map of England and Wales there are several mis-spellings that can only have been derived from the more correct renderings on the map of Wales. *L. Ymdhyfry* (Llandovery), on the Welsh map, and *Ymohyfry* on that of England and Wales, have already been mentioned; other instances are found in *Porth haythne* (Porth Aethwy in Anglesey) which became *Porthay-thur*; *Abermo* (Barmouth) which became *Aberho*; and *Aberystwyth* which became *Abeystwyth*.

From the forgoing notes it transpires that variations in the spellings of place-names arise from two principal causes: (a) mistakes due to the difficulties of deciphering badly written names or due to careless copying; (b) attempts to render phonetically names given by word of mouth.

We have a good illustration of the latter in a note made by Leland concerning a river that flows into the Teifi. 'The watar I hard say' he wrote, 'is caullid *Glesse rode*'—thus effectively disguising the real name, *Glâs-ffrwd*.⁷ The same writer was more successful when he wrote *Poullthelly*, which presents a recognizable pronunciation of *Pwllheli*, without unduly obscuring the name as it should be written.

Many interesting examples of phonetic efforts are to be found in the charts prepared for the use of sailors. In Mackenzie's 'Chart of the North part of Cardigan Bay' (1775) for example, we have *Tunvannau* (in Merioneth) for *Tonfanau*—the Welsh *f* being pronounced as *v*. Other charts by the same man illustrate the difficulties experienced by 'foreigners' in dealing with the Welsh *Ll*. Thinking no doubt of the Scottish pronunciation of *ch*, Mackenzie gave *Chlaninthuïn* for *Llanenddwyn*, *Chlanthua* for *Llanddwywr*, and *Chlanabba* for *Llanaber*. In spite of its strange appearance, a spoken *Chlan-in-thu-in* (with *th* as in *tether*) would almost certainly be understood by a Welshman, and a person enquiring for *Chlan-thu-a* would be much more likely to be understood than if, unfamiliar with the pronunciation of Welsh letters, he tried to say *Llanddwywr*.

Lanstuffin for *Llanstephan*, on Mackenzie's 'Chart of Carmarthen

⁶ F. J. North, *Humphrey Lhuyd's Maps of England and of Wales*. *Archaeologia Cambrensis*, 1937, xcii.

⁷ L. T. Smith, *The Itinerary in Wales of John Leland*, 1906, p. 56.

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Bay', 1775, sounds better than it looks, and the fact that on the same chart several other places near the Carmarthen coast, and in the Gower Peninsula opposite, are also made to begin with a single *L*, e.g. Lanelly, Langanith (Llangennith), Lanredian (Llanrhidian), while the *Chl* is used for inland places all round, suggests a limited region in which the 'foreign' element was so dominant that in the pronunciation of local names the Welsh *Ll* had been almost if not completely dropped. Since the arrival of the Normans, Gower has tended to be less typically Welsh than Wales as a whole, and the foreign element seems to have made itself felt also in the Carmarthen coastal region.

Llanrusted (on Greenville Collin's 'Chart of the coast of Wales', 1693, and other maps of the time) told the foreigner how to pronounce Llanrhystyd, a port southwards of Aberystwyth, while *Lemster* on Mercator's map of the British Isles, 1564, shows that the contracted pronunciation of Leominster was in vogue in the 16th century. Other examples of evidence as to abbreviated pronunciation are to be found in *Scokam*⁸ and *Skokum*⁹ for the Island of Skokholm off the Pembroke coast, *Harrison*¹⁰ for Haroldstone, *Goodick*¹⁰ for Goodwick, and *Muslick* for Musselwick,¹¹ all in Pembrokeshire.

In addition to throwing light upon the pronunciation of place-names, these attempts at phonetic renderings sometimes help to remove doubts concerning the original forms of names.

On Christopher Saxton's map of Merionethshire and Montgomeryshire the name *Sarnabugh Poynt* is placed in the sea between Towyn and Barmouth. The name, similarly spelt, occurs also in Speed's map of Merionethshire (1610), but on Greenville Collin's 'Chart of the coast of Wales', 1693, it is given as *Sarnaburg Point*. Other renderings include *Sarnabug Point* on the 'Chart of the St. George's Channel' prepared for Nicholas Tindal's edition of Rapin's *History of England* (1726-31), *Sarnabuch Pt*, on the 'Accurate map of North Wales' published by Christopher Bowles, 1785, and *Sarn buh*, on Mackenzie's 'Chart of the North Part of Cardigan Bay' (1775), *Sarny Buch*, on Cruchley's issue (about the middle of the 19th century) of maps based on the Ordnance Survey, with *Sarn-y-bych* and *Sarn y*

⁸ Mackenzie, 'Southwest Coast of Wales', 1775.

⁹ Chart of St. George's Channel, prepared for Nicholas Tindal's edition of Paul de Rapin's *History of England*, 1726-31.

¹⁰ Mackenzie's 'Chart of the Coast of Cardigan Bay', 1775.

¹¹ Mackenzie's 'Chart of the South Coast of Wales', 1775.

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Bwch in modern works.¹² The last named form also appeared on the map of England and Wales by John Rocque 'Chorographer to His Majesty,' 1794.

Sarn means a causeway, and in this case refers to a bank of stones stretching out to sea, after the fashion of two other sarns, larger, but of similar character, that have played an important part in the legendry and folk-lore of Cardigan Bay.¹³

On some original manuscript the name would, no doubt, have been quite correctly written out in the sea against some symbols indicating submerged rocks or shoals, but the professional cartographer, adding the word Point, made it to appear as the name of a promontory. *Burg*, *bug*, *bugh*, and *buh* are, in themselves, meaningless in terms of the Welsh language, but while Collin's *burg*, and Tindal's *bug* are the results of misunderstanding in the one case and carelessness in the other, from what we know of Saxton and Mackenzie we may assume that *bugh* and *buh* are attempts at phonetic rendering.

Buch is an obsolete Welsh word meaning cow, and it might seem that the original name was *Sarn-y-buch*—the causeway of the cow. The adoption of *bugh* and *buh* is, however, an indication that the vowel sound was something like *ugh*, the expression of disgust, or like the *oo* in cook, and this shows that the Welsh form cannot have been *buch*, for in Welsh it is *w* and not *u* which has the sound of *oo*, and *buch*, like *bugh* and *buh* must have been an attempt at phonetics.

The original name of the submerged pebble bank was, therefore, *Sarn y bwch*, the buck's causeway; this makes intelligible another name that has also been applied to the bank, *Sarn y gafr*,¹⁴ for *bwch gafr* means he-goat. It also fits in with the fact that the headland near Towyn, which can be seen from Aberystwyth, is sometimes locally called *Pen Bwch*.*

As examples of less successful efforts at phonetic spellings, which copyists still further obscured, we may take *Sunny*, the name given to a sheet of water adjoining the coast near Towyn in Merionethshire, on Mackenzie's 'Chart of the North Part of Cardigan Bay', 1775, and

¹² W. Ashton. *The Evolution of a Coast-line*. London, 1920; O. T. Jones. *Welsh Outlook*, vol. 8 (1921) p. 310; C. F. Cliffe. *Book of North Wales*, London (1850).

¹³ F. J. North, 'The Legend of Llys Helig—its Origin and its Significance'. *Llandudno, Colwyn Bay and District Field Club*, Llandudno, 1940.

¹⁴ *The Cambrian Traveller's Guide*, London, 1813, col. 337.

* Information from Mr R. J. Thomas, Aberystwyth.

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Carodimbitrock on the reduced version of Saxton's map of Caernarvon which appeared in the 1607 edition of Camden's *Britannia*.

A river that flows from Lake Tal-y-llyn to the sea near Towyn is called Avon Dysynni, and near its mouth it spreads out into a lake or lagoon called Broadwater. Several maps, e.g. Speed's Merionethshire (1610) and Bowles' North Wales (1785), give the name of the river as *Desunny*, but in Mackenzie's chart the name has been shortened to *Sunny*, and made to apply not to the river, but to the lake at its mouth.

Carodimbitrock is the name given (in Camden) to a point on the coast near Pwllheli. Other 17th-century maps give the name as *Carodinbillrock*, which as far as appearance goes is no more helpful. Saxton's map of Caernarvonshire and Anglesey (1578) records the name as *Carodimbil rock*, which brings us a little nearer to the correct form.

On Bowles' map of North Wales, 1785, it is *Carreg y Wimbill*, in which we recognize Carreg-yr-Imbill, better known to English visitors as the Gimlet or Gimblet Rock. Ignorant of the fact that the Welsh article *y* becomes *yr* when followed by a vowel, many of the 19th-century map-publishers (following Cary and Cruchley) gave the name as Careg-y-rimbill. One of the most stupid of all the renderings of the name is *Caregy Wanbill* on the map of North Wales in Ellis's *New and Correct Atlas of England and Wales*, 1819. In Carodimbitrock the last syllable is an unnecessary repetition, for Carreg means rock.

To illustrate the application of the methods of approach outlined in the preceding paragraphs, we might take the following map-names, and see how one name came to assume such diverse forms: *Chlanbaddin*,¹⁵ *Lampad Vale*,¹⁶ *Badoin*,¹⁷ and *Laupoderuain*.¹⁸ Other map-renderings include *Llanbedvaur*,¹⁹ *Llanbadarnvawr*,²⁰ *L. Badarn*,²¹ *Lampaderuale*,²² and *Llanpaternuaure*.²³

The real name is Llanbadarn Fawr (the *f* pronounced as *v*) and it relates to a village now to all intents and purposes absorbed by the town of Aberystwyth. It takes its name from the church dedicated to St. Padarn (St. Paternus) who is supposed to have come from Armorica

¹⁵ M. Mackenzie, *Chart of the North part of Cardigan Bay*, 1775.

¹⁶ Anonymous (Cottonian) map of the British Isles, 1534.

¹⁷ H. Lhuyd, *England and Wales*, 1573.

¹⁸ Mercator, *British Isles*, 1564.

¹⁹ Herman Moll, *South Wales*, 1724.

²⁰ John Speed, *Cardiganshire*, 1610.

²¹ H. Lhuyd, *Wales*, 1573.

²² Mercator, *Europe*, 1554.

²³ Saxton, *England and Wales*, 1583.

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and have settled here.²⁴ The adjective *fawr*, meaning great, distinguishes this church (and village) from several others also called Llanbadarn, which St. Padarn is supposed to have founded elsewhere in Cardiganshire and the adjacent parts of Brecknockshire and Radnorshire.

Speed's *Llanbadarnvawr* merely changes the written *f* for the spoken *v*, while Saxton's *Llanpaternuaure* gives the French form *Paterne*, and uses *u* and *v* as interchangeable letters. Mercator's *Laupoderuain* results from an *n* being taken for a *u* (a mistake easily made in the writing of the time, and, indeed, by no means infrequent today), and from a *u* being used for a *v*, with *ur* at the end miscopied as *in* (also a mistake readily understandable in the circumstances). Mercator's *Lampaderuale*, the anonymous *Lampad Vale*, and Moll's *Llanbadvaur* result from confusion between Llanbadarn and Lampeter (variously miscopied as Lampads and Lampeds) with, in the case of the first two, unsuccessful guesses concerning the concluding part of the name.

In the draft of his map of Wales, Humphrey Lhuyd gave the name as *L.Badarn*, and *Badoin* results from the elimination of *L* and the conversion of *ar* into *oi* when the engraver employed by Abraham Ortelius drew Lhuyd's map of England and Wales. *Chlabaddin* is Mackenzie's attempt to reproduce the name as it was pronounced.

If it seems a matter for surprise that early maps include a relatively high proportion of names relating to coastal features, not now regarded as of sufficient importance to be inserted even on maps of considerably larger scale than those with which we have been concerned, the explanation lies in the fact that cartographers and map publishers had to rely largely on sea-faring travellers for their information, and in those days features that served as landmarks were almost as important to sailors as the harbours to which they were bound.

Recognition of this fact often throws light upon map-names that would otherwise be difficult to explain. For example, in the south-eastern part of Glamorgan, on a manuscript map of Britain prepared by the Swiss geographer Aegidius Tschudi, about 1550,²⁵ there is the name *Sannicola*, which is obviously a form of St. Nicholas, and since there is an old established village of that name on the main road a few miles west of Cardiff, it might seem, on first thoughts, unnecessary to question the significance of the name on Tschudi's map.

²⁴ For an account of St. Padarn see S. Baring Gould and J. Fisher, *Lives of the British Saints*, vol. IV (1913), pp. 39-51.

²⁵ E. Heawood, 'Early Maps of Great Britain . . . Aegidius Tschudi's Maps', *Geographical Journal*, 1933, LXXXI, 39-43.

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It is clear, however, that Tschudi's names were derived from various sources—some (as the spellings indicate) from Leland, some from the Ptolemy maps (e.g. *Tuerobis fl.* for the Teifi, with *Octapitarum* and *Ganganorum* for the two principal Welsh promontories), and some from the Portolan charts (the sea charts of the 14th and two subsequent centuries). The form of the name Sannicola suggests that it belongs to the last-named category, for it appears frequently on those charts, either as given above or else as *Sannicolas*, or *S. Nicollo*. Now the portolan charts were intended for the use of mariners, and the names included in them are mostly those of places where ships could call, or of places that could be sighted for the guidance of seamen, but the village of St. Nicholas can neither be reached by water nor be seen from the sea, which seems to suggest that it is not the place indicated by Tschudi's name.

Enquiries among old seamen elicited the information that the tower of the church at Barry, on the shores of the Bristol Channel, used to be a familiar landmark until the growth of the town and coal-port, within living memory, made it difficult to locate; and since the church is dedicated to St. Nicholas, it transpires that *Sannicola* on Tschudi's map refers to the church around which the town and port of Barry have grown, not to the inland village of St. Nicholas.

In the middle of the 14th century an unknown Spanish friar wrote what he called a *Book of the Knowledge of all the Kingdoms, lands, and lordships that are in the world*.²⁶ His book purported to be an account of his own travels and observations in all parts of the world then known, but some of his place-names suggest that his information was sometimes derived from maps and not from personal visits or enquiry.

The friar described how, leaving the land of *Escocia* he came to the kingdom of *Inglaterra*, which, he said, had eleven great cities. Of these he named seven, all of them ports, for which he used characteristic portolan chart forms, e.g. *Londres*, *Gunsa* (Winchelsea), *Antona* (Southampton), *Artamua* (Dartmouth), *Premua* (Plymouth), and *Miraforda* (Milford). He further stated that in the province 'they call *Gales* (i.e. Wales) there is a great city called *Dirgales*'. Now there is no city in Wales with a name anything like *Dirgales*, which name has usually been regarded as incapable of interpretation.²⁷ On many portolan charts, however, there are, in the region we should call Wales,

²⁶ *Libro del Conoscimiento*, etc., ed. by M. J. de la Espada (1877) trans. by C. Markham. London, Hakluyt Society (1912).

²⁷ *Libro del Conoscimiento*, *ibid.*, p. 65.

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the names *Norgalles* (or *NorGales*, or *Morgales*), and *Uirgalles* (or *uirGales*, or *Virgales*), meaning, respectively, North Wales and South Wales, and these names appear on quite early charts when few if any of the Welsh ports were included. The Spanish for south is *sur*, and it would seem that on some early chart the *Surgales* appeared as *uirgales*. Conservatism is one of the characteristics of the portolan charts, and as additional names came to be added around the Welsh coast, *Norgales* and *uirgales* remained in the list, and even until late in the 16th century were written near the coast as if they, too, were ports; often they were written in red or in some distinctive fashion, as if they were to be taken as equal in importance to such ports as Milford, Bristol and Southampton.²⁸

In the form of lettering used on the charts an indifferently written *u* or *v* (see for example the *virgales* in Benincasa's chart 1467) could easily have been mistaken for a *d*, and so, for the author of the 'Book of Knowledge' Wales became possessed of a city called *Dirgales*. It is difficult to see how this mistake could have arisen, except as a result of writing up a journey on the basis of a map—one might even be more definite and say upon the basis of a portolan chart of Catalan origin. The author evidently arrived at his *eleven* great cities by counting the names which were written in red or in some other distinctive fashion upon his map. It was customary among the chart-makers and chart-copiers to emphasize the more important names in this way, and in the early part of the 14th century the number so distinguished in England was usually from ten to fifteen: those 'cities' named by the author were amongst those always given special treatment, if any were, and so were the names *Gales* and *Uirgales*.

There is nothing in the list to suggest knowledge of the monkish *mappae mundi* like those by Ranulf Higden and the 'Hereford' map, in which the names mostly relate to places of ecclesiastical importance, e.g. *Deram* (Durham), *Lincol*, *Eborum* (York), and *Exeter*.

No traveller in Wales could have visited a city called *Dirgales*, while no one living in Wales and no sailor frequenting Welsh ports would have spoken of such a place. This suspicion that some of the author's 'journeys' were made on maps receives support from such statements as, 'I left *Inglaterra* in a boat and reached the island of *Irlanda*, which is a short crossing of a mile'. Leaving *Irlanda* he sailed to other islands, among which was *Ibernia*. From the context

²⁸ See for example the charts by G. Benincasa, 1467, and G. Calapoda, 1552, both reproduced in Nordenskiöld's *Periplus* (1897), plates 33 and 25 respectively.

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his Ibernica would seem to have been Iceland, but the author got his notes mixed up a little, because he cited as among the peculiarities of the island that there were no snakes and other venomous things, and that 'there are trees and the fruit that they bear are very fat birds. These birds are very good eating whether boiled or roasted'. It is more likely that the Friar had read accounts like those by Giraldus Cambrensis, in his *Topography of Ireland*, of birds called 'bernacles' which begin life as 'gummy excrescences from pine-beams floating in the water' and eventually being 'well covered with feathers take their flight into the free air',²⁹ than that he saw fat birds growing upon the trees of Iceland! The bird-producing trees of *Ireland* were well known (by repute!) at the period when the 'Book of Knowledge' was compiled, for Sir John Mandeville was made to tell how, when the people of the land beyond Cathay showed him wonderful trees 'I told them of as great a marvel . . . I told them that in our country were trees that bear a fruit that becomes birds flying'.³⁰ The trees, he explained in another passage, grew upon the shores of the Irish Sea.

It transpires then, that for the Friar, a little knowledge proved to be dangerous, as it often does when places-name are involved.

On another map, the great Marine Chart made by Martin Waldseemüller at St. Dié in Lorraine in 1576, *Surgalles* (via the form *S. Galles*) became the name of a cape called after a saint, *C. de S. Gale*.

Attempts to record names that have been given by word of mouth throw light upon other problems than those already discussed; they may, for example, indicate the nationality of the person by whom the information was brought to the map-maker, if not of the cartographer himself. This is illustrated by the maps in a little printed manual for seamen preserved in the Bodleian Library and discussed in ANTIQUITY.³¹ The volume is probably the 'almanack with a chart of the coasting part of England, in a small portable volume, bound and printed on velum or rather Parchment by Winken de Word, An. 1520', that John Bagford mentioned in a letter to Thomas Hearne, who was assistant-keeper in the Bodleian Library in the early years of the 18th century.

Only their positions on the maps enable us to recognize *Quicoitbit*

²⁹ *The Topography of Ireland*, in *The Historical Works of Giraldus Cambrensis*, ch. xi, ed. T. Wright. Bohn, London (1863), p. 36.

³⁰ A. W. Pollard, *The Travels of Sir John Mandeville, the version of the Cotton Manuscript*, London, 1900, p. 174.

³¹ I. G. Philip, *Early Maps*, ANTIQUITY, 1937, xi, 486-9; E. G. R. Taylor, *Early Maps and Tide Tables*, *ibid.* 1938, xii, 219-23.

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and *Quiquesale* as Kirkcudbright and Kinsale respectively, but the forms of the names point to the intervention of a French-speaking person—it is indeed likely that the maps were prepared for sailors engaged in the Bordeaux wine trade. *Quisale* would have been sufficient for Kinsale, and this repetition of the first syllable is an example of a mistake that often appears in early manuscripts due to a tendency to repeat something already written. The same tendency was responsible for the naming of two islands at the mouth of the Bristol Channel, *Londay* and *Canday* respectively, on the map of northwestern Europe in the *Mariner's Mirrour* (1588), which was an English edition by Anthony Ashley of the atlas of charts called *Spiegel der Zeevaert*, published by L. J. Wagenaer of Enkhuizen in 1585.

Londay is quite a usual map-rendering for Lundy, but there are no grounds for substituting *Canday* for Caldy, and as far as I know the 'Mariner's Mirror' is unique in this respect. The only reasonable explanation is that, having written *Lo-nday*, the engraver unthinkingly followed it with *Ca-nday*.

This map of Wagenaer's also provides an illustration of the way in which the nomenclature of a map may vary in its various parts according to the reliability of the information available to the compiler. The map was originally prepared in the Low Countries, and it would seem that Wagenaer's contacts were more with the eastern coasts of England and Scotland than with the western ports.

The names between London and Whitby are in their correct order, and if not spelt correctly are clearly recognizable—they are *London*, *Colchester*, *Ipswich*, *Yarmouth*, *Cromere*, *Lyn*, *Boston*, *Hull*, *Flamborough*, *Scarborough*, and *Whitby*. Round the Welsh coast on the other hand we have the following:—*Abergal*, *Carminia*, *Bendeser*, *Montlais*, *Stalmuyl*, *Newport*, *St. Davide's*, *Milford*, *Cimby* and *Armezín*. In this list we can readily recognize Abergele, Newport (Pem.), St. David's and Milford, and can make suggestions concerning all but one of the others, but *Montlais* defies identification.

Bendeser stands for Bardsey, and *Carmarnia* seems to have been meant for *Carnua* (a rendering of Caernarvon common to the portolan charts), although it may be compounded of that name and *Conuai* (Conway). *Stalmuyl* retains sufficient of its original character to be identified with *Stidwal*, by which St. Tudwal's Island is often indicated in the portolan charts. *Cimby*, for Tenby, illustrates a common error due to the similarity between *C* and *T* in early manuscripts, supplemented by some careless copying which converted *en* into *im*.

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Armezín, taken by itself, would be as meaningless as Montlais, but its position as the next port to Tenby suggests that it may be the result of some foreign sailor, hearing the name Carmarthen, writing down what a Dutch engraver took to be Armezín (Ar-me-zin). It may, on the other hand, have been meant for *Armez* (one syllable like *Orme's* in Great Orme's Head) *in*, which in turn was meant for Worm's Head. In respect of such names we can do little more than guess (although even guesses may be disciplined) and it is clear that Wagenaer knew much less about the Welsh coast than he did of those washed by the North Sea.

The names between Abergele and Milford are about equally spaced, and since Stalmuyl comes next to Newport, almost the whole of the coast of Cardigan Bay—more than 100 miles including several harbours and ports—has been suppressed.

For the opposite coast of Ireland the chart is even more difficult to interpret. Going from south to north we have *Ercloe*, *Wexford*, *Duuetnes*, *Hothe*, *Lantey*, *Bowley*, *Garni cast*, *Arglas*, *Ergla*, *Cnochfeques*, *Rusto* and *Dunlyth*. Wexford, probably the most frequented by continental sailors of all those ports, is clear enough, but if *Ercloe* means Arklow it is placed south instead of north of Wexford. *Hothe* stands for Howth, and *Duuetnes*, next to it, looks as if it might have originated in one of the many early renderings (or misrenderings) of Dublin, e.g. *Dunuelin* on the 14th century portolan chart by Perrinus Vesconte.³² *Lantey* is most likely Lambay Island (although the name is placed on the mainland as it is on the anonymous map of 1534 and on several portolan charts, such as one by Giovanni Martines, 1582). A less likely guess is that it may represent Laytown, south of Drogheda.

Bowley, which Ortelius³³ gives as *Bewley*, is evidently a phonetic representation of Beaulieu, near the mouth of the Boyne. *Garni Cast* seems to be compounded of Carlingford and Grene Castle, names placed close together on contemporary maps—the map of Ireland in the little French sailing manual already mentioned gives *Carnifort*. *Arglas* and *Ergla* seem to be Ardglass duplicated, and *Cnochfeques* (Knocfergus on the Ortelius map of Great Britain and Ireland, 1570) stands for Carrickfergus, while *Rusto* signifies Portrush, and *Dunlyth*, Dunluce.

It is clear, therefore, that while each of the names given between London and Whitby can easily be recognized, one who has not made a study of Welsh and Irish place-names might find considerable difficulty

³² Reproduced in A. E. Nordenskiöld *Periplus*, Stockholm, 1897, plate VII.

³³ Map of Great Britain and Ireland in the Ortelius Atlas of 1570.

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in identifying many of the names given on these coasts. There is also a corresponding deterioration in the delineation of the coastlines.

Wagenaer's charts were well known to English seamen, who called them (and, through them, chart books generally) *Waggoners*, but in the light of the foregoing notes upon one of them, we may perhaps be inclined to sympathize with Luke Fox, who spent several months in a vain search for the northwest passage, and who, offered money to buy books, refused to take any with him, for the two-fold reason that sailors at sea had no spare time, and that if an emergency arose it was more important to act at once than to rush away and consult a waggoner.³⁴

The object of these notes is to indicate some of the various ways in which a study of the map-names of a limited region can be approached. That they relate mainly to Wales means no more than that Wales is an area in which I am professionally interested and by descent connected, and in different ways and in varying degrees any other part of our island home would repay similar attention.

Although here concerned primarily with early maps, it may be of interest to draw attention to the attitude of the Ordnance Survey towards place-name problems when the original survey maps were being prepared.³⁵

In 1831 a certain Alfred Thomas of Carmarthen wrote to the Map Office at the Tower offering to assist the Ordnance Survey in revising the place-names of Cardiganshire, adding, 'for being conversant with the Welsh orthography, and a variety of other circumstances necessarily attendant on such a Survey in Wales, will I flatter myself render me fully competent to complete such an undertaking to your satisfaction'. Mr Thomas stated that he found a great many mistakes and omissions, and expressed the opinion that such matters must present great difficulties to the English surveyors, not only on account of their ignorance of the Welsh language, but also because 'very few of the natives who speak the Welsh language know anything about its orthography'. He pointed out, also, that many buildings and natural features took their names from the stream near which they were situated, and complained that many such names were omitted.

The letter was sent to the Surveyor responsible for the map that

³⁴ Luke Fox, *North-West Fox, or Fox from the North-west passage*, 1635.

³⁵ Information from early letter books in the Ordnance Survey archives, examined by kind permission of the Director General, during the course of investigation into the history of geology in this country.

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was criticized, and it brought from him a very spirited rejoinder. In it he said, 'Had Mr A. Thomas better pretensions to the qualifications which he flatters himself he so fully possesses, his observations might be more tamely submitted to by the Assistant Surveyor whom he treats so unceremoniously. In making this observation upon Mr A. Thomas' being unqualified for interfering with the Authority for names on the Ordnance Map, I do not do it from any personal acquaintance, I never so much as heard of his name before—it is from his own letter his knowledge of Welsh must stand condemned, for it is certainly not so perfect but he may yet learn how to spell if he carefully reads the Ordnance Map of Caermarthenshire;³⁶ I allude to the name Duffryn, which if written as Mr Thomas has it "Diffryn" it would indeed be diverting to his countrymen'.

Then, having pointed out other inconsistencies in Mr Thomas' remarks, he continued 'Mr A. Thomas' torrent of invective against the Gentle streamlets which so peacefully pursue their curly course by numerous habitations of mud and wickerwork in the aforesaid county, each of which takes its name from the streamlet or rill, is one objection that will not hold good as a general rule, as writing such names often creates confusion in a whole dingle, and it is already agreed by the best authorities in Caermarthenshire that there are too many of such names written as Mr Thomas sees wanting. If the Thames had been one of these streamlets or rills, and if London had been called "Thames side", surely Mr A. Thomas would be very likely after a little consideration to discover the name of the stream from the data already given'.

He expressed the opinion that Mr Thomas was not likely to be competent to render the service he offered, and pointed out that unskilled assistance 'retards the progress of the work, and contributes towards filling the cup of bitters more than my limited powers of description can possibly detail'. Finally, he apologized for what might have been regarded as an unseemly letter to his superior officer—'I have to regret having used so much freedom of language in thus addressing you, Sir, but I trust the Circumstance of so unjustifiable an attack upon the acknowledged orthography of the Caermarthen sheet will be an apology for the warmth of my feelings'.

Captain Mudge did not forward the Surveyor's letter to Mr A. Thomas, but, instead, explained the steps which were taken to secure

³⁶ The Assistant Surveyor was himself wrong in writing Caermarthenshire instead of Carmarthenshire.

PLACE-NAMES AND EARLY MAPS

correct orthography on the maps. 'We have' he wrote, 'long been aware of the difficulty, and I might say, impossibility of spelling the Welsh names of places so as to be satisfactory to those who are considered the best authorities: and it has not infrequently happened that to guard against errors of the kind, we have had to erase from the Copper Plate, and enter again in its original state, the same name more than once; but we have lately adopted a system which answers the end perhaps as completely as may be possible. The Surveyor who is employed in the County . . . transmits for the Engravers . . . a tabular list of *all* the names on the map, showing at one view, opposite to *each* name, all the authorities that have been consulted, in addition to such as are kept here for the same purposes, viz.:—*Camden, Carlisle, Index Villaris, the Population abstract* and others—The local authorities which we have derived most advantage from, have been Clergymen, and with the Parishes of course they ought to be especially conversant, but in order further to insure accuracy as far as our means and foresight can extend, the Welsh work is consigned to the care and superintendence of natives of Wales whose labours are almost entirely confined to that country'.

From this it would seem that if mistakes occur in the early Survey maps they were not due to carelessness on the part of the Surveyors but to the inaccuracy of the information given to them, or, occasionally, as the letter now to be mentioned shows, to pressure from high places. In 1833, Sir Henry Verney, M.P., wrote to the Map Office 'respecting the correction of names in the southeast of the Banbury sheet' and Captain Mudge's reply contained the following illuminating passage:— 'as you have a perfect right to spell your own place as you may think proper Cleydon shall be substituted for Claydon if you wish it to be so; but I find all authorities, modern and ancient, prefer the *a* to the *e*: for example, in Domesday Book it is *Claidone*, in Speed's Atlas, published in 1614, all the Claydons in Buckinghamshire are *Claidone*, also in the Index Villaris published in 1680, likewise *Claydon*, in Carlisle's Topographical Dictionary, 1808, *Claydon*, and in Lewis' Topographical Dictionary, not long published, *Claydon*. . . . I hope the map will be advanced sufficiently in the course of a few days to allow me to send you a Proof, and to request you will have the goodness to examine it and see if we have made any more blunders'.

The suggestion to adopt Sir Henry's spelling was not acted upon. In all editions of the Survey maps the Claydons in Bucks are spelt with an 'a', and not with an 'e'.

Notes and News

ARCHAEOLOGY IN UZBEKISTAN

These notes were received at Field Museum of Natural History, Chicago, from the Society for the Promotion of Cultural Relations with Foreign Countries (VOKS) in Moscow. The excavations were conducted under the joint auspices of the Historical Institute of Material Culture (IIMK), Leningrad and the Uzbekistan Committee for the Preservation and Study of Monuments of Material Culture (UZKOM-STARIS), Tashkent.

This information supplements recent articles¹ on archaeological discoveries within the confines of the Soviet Union.

1. The most important find² during the past few years has been that of a Neanderthal skull associated with Mousterian culture in a large rock-shelter near Tashkent. This is the first discovery of Neanderthal man in Central Asia—a most important link in the chain of distribution of Mousterian sites in Asia, Africa and Europe.

In southwestern Uzbekistan, one of the most arid sections of the Soviet Union, A. P. Okladnikov³ in cooperation with V. D. Zaporozhskaja excavated Teshik-Tash rock-shelter, which lies in the Žautolosh Darya gorge and at about 5000 feet above the level of the Turgan Darya.

The fragmentary skeleton of a young child, seven or eight years of age, was excavated. After reconstruction at the Anthropological Institute in Moscow the skull presented characteristic Neanderthaloid traits. Associated with the skeleton were stone tools of Upper Mousterian types (FIGS. 1-4). On many bones (FIG. 5) there were cutting marks made by flint tools but no bone implements were found.

Okladnikov states that the closest analogies to the cultural deposits from Teshik-Tash are from the Caucasus, Crimea, southern Kurdistan, and Palestine.

2. The Surkhan Darya Expedition made some preliminary surveys near Baisun. Two corridor-like caves, containing large accumulations of bones of wild and domesticated animals, were excavated at

¹ See footnote in *ANTIQUITY*, 1940, XIV, 404-26.

² See H. Field and E. Prostov, *American Journal of Archaeology*, 1931, XLIII, 331-2; A. P. Okladnikov, *Vestnik Drevnei Istorii*, 1939, no. 7, 256-7, and *Asia*, 1940, XL, 357-61, 427-9; and A. Hrdlička, *Science*, 1939, XC, no. 2335, 296-8.

³ See *Asia*, 1940, XL, 357-61, 427-9.



FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5

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Kaflan Dara and Dulta-Khan. Fragments of ancient vessels were also found. These caves evidently served large beasts of prey as places of refuge and the bones are the remains of their quarry.

In Ob-Angor cave a smelting furnace, in the form of a vessel, two metres in height, with openings in the sides for the draft, was found. Tenth- and eleventh-century sherds were unearthed. Two cultural levels, yielding charcoal, animal bones, and typologically palaeolithic flint implements were found beneath stones in a cave situated in the Kurgan Darya gorge.

Palaeolithic, Neolithic and Iron Age strata were found in excavating caves near Machai in Amir-Temir. In the lowest levels typologically Mousterian implements, including a hand-axe, a discoidal nucleus, and a scraper came to light. These implements resembled those from Teshik-Tash. To the east of Baisun, in the gorge which leads from the Temir-Ulde river, palaeolithic implements and animal bones have been found.

Since Soviet archaeologists are continuing their researches in many areas of Central Asia we can feel assured that new important results may be expected.

HENRY FIELD and EUGENE PROSTOV.

HORSES, CHARIOTS AND BATTLE-AXES

Dr Clark's timely and convincing refutation of the pan-Germanist theory of the origin of the horse-chariot complex could have been made still more conclusive had not his self-imposed limitation excluded a fuller examination of the evidence from Hither Asia. His admission (ANTIQUITY, xv, p. 56) 'the appearance of light war-chariots, drawn by horses and fitted with spoked wheels for speed came relatively late in the history of the old culture-lands, and it was certainly sudden, is a gratuitous present to his adversaries.

(1) *The antiquity of the horse in Hither Asia* can now be established thanks to Ghirshman's excavations at Tepe Sialk in southwestern Iran.¹ These put into their proper context the famous remains of *Equus caballus Pumpellii* from Anau; for Anau I-II is more or less parallel to Sialk I, and Sialk I is on the most modest estimate early 14th millennium. Moreover, remains of the same horses (albeit only two teeth) have been identified at Sialk II,² still in the 14th millennium.

¹ Ghirshman, *Fouilles de Sialk*, 1938, I, 77, 87, 103.

² Vaufray, in Ghirshman, *Fouilles de Sialk*, 1939, II, 196.

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So there were horses in southwestern Iran by that date. The pictogram, 'ass-mountain' in the Jemdet Nasr tablets³ can therefore be accepted at its face value as meaning what the conventionalized ideogram ANSU.KUR.RA means in later texts, viz. 'horse' and therefore attests at least an acquaintance with horses in Mesopotamia itself by 3000 B.C. Finally the accounts just published by Gadd from Chagar Bazar in North Syria⁴ show that yokes of horses were being kept in what was later Mitannian territory by the end of the 19th century B.C.

(2) *The antiquity of the chariot in Hither Asia* is equally attested by tablets and sealings of the Uruk period in Sumer⁵ and by models from Gawra VIII in Assyria.⁶ These were doubtless the heavy vehicles familiar from graves and monuments of the Early Dynastic age. Whether they were drawn by horses or asses is of course unknown. In either case the transfer of the ox's harness to an equid (it would fit an ass no better than a horse) is thereby referred to the 19th millennium. It is noteworthy that the Sumerians harnessed asses to the plough. The occurrence side by side of sledges and wheeled vehicles in the Uruk tablets, as later in the Royal Tombs of Ur, is likewise significant.

(3) *The descent of the light horse-chariot of the 12nd millennium* from the heavier vehicle of the 13rd cannot be traced in the archaeological record alone owing to a quite accidental break in that record. It seems to be due to a change of fashion in glyptic and monumental art. Early seals and monuments like the 'standard' from Ur depict chariots in battle scenes. After 2500 B.C. battle scenes were no longer fashionable subjects for seals, and no monuments comparable to the standard happen to have survived. If there be no chariots on the Stele of the Vultures from Lagash, a little later the written record mentions teams of asses for chariots supported by the temples of the same city.⁷ The gap of a thousand years that separates representations of chariots in the Orient allows ample time for substantial structural improvements; the written record shows that there are no grounds for assuming any interruption of the tradition.

(4) *A Mitannian centre for chariotry in the 12nd millennium* is rightly accepted by Dr Clark. The piedmont-steppe zone of North

³ No. 129 in Langdon, *Pictographic tablets from Jemdet Nasr* (Oxford edition of *Cuneiform Texts*, VII).

⁴ *Iraq*, 1940, VII, 31.

⁵ Falkenstein, *Archaische Texte aus Uruk*, no. 744.

⁶ Speiser, *Excavations at Tepe Gawra*, 1935, p. 74.

⁷ Deimel, 'Sumerische Tempelwirtschaft zur Zeit Urukaginas' (*Orientalia*, 1931, II), 105.

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Syria, later the centre of the Mitanni State, is well adapted for the use of the chariot in war. It is adjacent to wooded mountains where even birch-trees grow. But there is not a scrap of direct evidence to connect the development of the light war-chariot fitted with spoked wheels and drawn by horses with the Aryan rulers who established themselves there in the 15th century. Chariots had been known in the region from the 14th millennium as the models from Gawra show. They were being used and drawn by horses by 1800 B.C. at Chagar Bazar. By that date the chariot-horses were already under the charge of five grooms with a 'trainer' over them. This 'trainer' must rank, as Gadd* remarks, as the predecessor of the celebrated Kikkuli of Mitanni whose treatise on horse training contains Aryan numerals. These numerals lose much of their supposed significance now it is known that trainers were training horses in North Syria nearly three and a half centuries before the occurrence of the first Aryan names; in close on four hundred names from Chagar Bazar all are Semitic or Hurrian in the 19th century. That the light chariot was invented here is quite possible—though of course there were chariots in the Indus valley (pre-Aryan!) and elsewhere in the 11th millennium. In any case the advance had been made and had penetrated even to Egypt and Greece before 1500 B.C. The first king of the Aryan dynasty, Shaushshatar, did not ascend the throne before 1450 B.C. Only the improved vehicle 'in which the axle was attached to the rear of the carriage' may on the extant evidence be later than the establishment of Aryan rulers in Mitanni. Only this improvement therefore could possibly be attributed to their patronage of local wheelwrights.

(5) *The possibility of correlating horses and battle-axes* is not, funnily enough, affected by any of these arguments. Dr Clark may indeed be ill advised in accepting the bones assigned by Schliemann to Troy II as supporting the correlation; the far more reliable American excavators⁸ have so far reported no horse bones before Troy VI. Nor is it clear that the bad drawing on the celebrated cylinder from Kül-tepe can be accepted as evidence for any particular species of equid. On the other hand in Assyria and Mesopotamia there are some neglected objects which must be accepted as battle-axes, degenerate or undeveloped if you like,⁹ dating from Al'Ubad to Early Dynastic times (i.e. 14th and

* *Iraq*, 1940, VII, 31.

⁸ *AJA.*, XLI, 595.

⁹ I discussed these in my Presidential Address to Section II of the British Association, *AJA.*, XLIII, 16 ff.

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early IIIrd millennia). Moreover there is a very fine copper bipennis from a IVth millennium layer at Susa¹⁰ as well as several shaft-hole axes of stone. So battle-axes do seem more or less contemporary with chariots drawn by equids even in Elam and Mesopotamia, but not further east. The written records, however, do not help to connect either axes or equids with Aryans or other Indo-Europeans from Europe or anywhere else.

V. GORDON CHILDE.

DEAD-FALL TRAPS

In connexion with the distribution in Europe of the Dead-fall Traps discussed in the December issue of *ANTIQUITY*, it is interesting to note that both Aeschylus and Aristophanes bear witness to the use in classical times of a trap of similar mechanism (*ἵπος*). Thus in the *Prometheus Vincetus* (line 365) Prometheus speaks of himself to Oceanus as weighted down as in a trap under the roots of Aetna (*ἰπούμενος ῥίξαισιν Αἰτναίας ὕπο*).

So too in the *Knights* (line 924) Kleon describes himself as being trapped beneath the weight of Income-tax (*ἰπούμενος ταῖς εἰσφοραῖς*). It is clear from these quotations that the trap was in general use and that it must have worked on the same general principle as that described by Mr Hornell.

G. A. AUDEN.

IMPRESSIONS OF GRAIN ON POTTERY (PLATE I)

It occasionally happens that impressions of grain or other seeds are observable on the surface of shards of prehistoric pottery. The systematic work of Georg Sarauw, who examined and identified over 1500 such impressions on Danish pottery, has been summarized in a recent paper in *ANTIQUITY*.* Inasmuch as the impressions may be more commonly met with than the grain itself, they may, when properly examined, provide valuable evidence as to the prevalence of different varieties of cereals and other useful plants at the various periods to which the respective vessels or shards are assignable. If a systematic study of this kind were to be carried out over the whole of Europe as well as over large tracts of the adjacent continents, there seems little doubt that something like the complete history of the early cultivation of corn and other plants would thereby be unfolded.

¹⁰ *Memoires de la Délégation en Perse*, xxv, 181-2, fig. 4; *L'Anthropologie*, xl, 229, fig. 4.

* *ANTIQUITY*, 1938, xii, 136-41.

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Before the present war put an end to such activities the National Museum of Copenhagen had actually made a start on this Herculean task. In the early summer of 1939 Hans Helbæk, assistant to Professor Gudmund Hatt, came to England to study as much of our dated pottery as possible. He discovered a certain number of impressions of grain that had escaped our scrutiny, but the detailed analysis of his results awaits publication. He found that grain-impressions occur far less frequently on British than on Danish pottery, from which he inferred that domestic pot-making took place under somewhat different circumstances in the two countries, the Danish housewife perhaps mixing her clay in the neighbourhood of the corn-bin. Such impressions are found only on hand-made pottery of the coarser sort; slip-coated vessels are generally sterile and not worth spending time over.

Among Helbæk's discoveries were the impressions of about ten grains of barley on the under-side of the base of a small complete vessel of Iron Age A type, but without history, preserved in the Brighton Museum. PLATE I shows this example, and also a wax positive squeeze taken from it and coloured naturalistically.

Helbæk's identifications were made by pressing a suitable plastic material into all suspected cavities on the surfaces of the vessels or shards that he was examining. The shape of the resulting positive corresponds to that of the seed (or, it may be sometimes, small stone) that made the impression, and in the case of a seed the form and dimensions afford the necessary clue to its identity. E.C.C.

BURNISHING STONES FOR POTTERY (PLATE II)

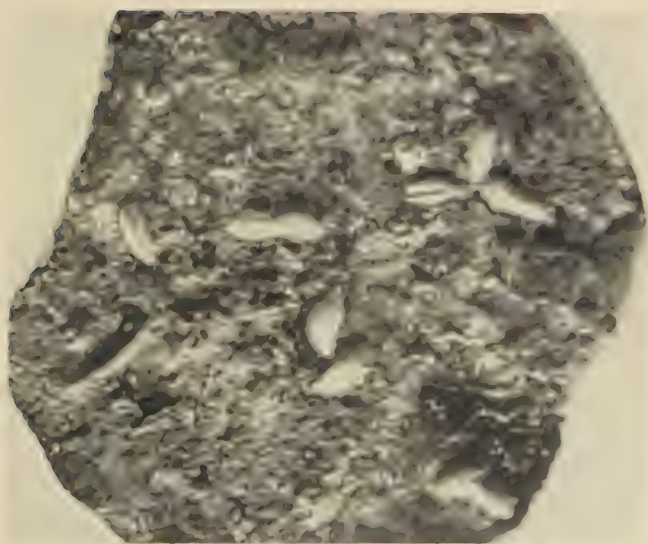
In his recent article describing the modern hand-made pottery of Jutland, Axel Steensberg refers to the use of a flint for smoothing and burnishing the slip, or outer coating of smooth clay.¹ He says that the smooth, round flint which is employed for this purpose only becomes really good after being used for about twenty years, during which time it acquires a lustrous polish as a result of friction with the silica in the clay. At my request Steensberg sent me the accompanying photograph of two such lustrous flints from western Jutland, recently employed for this purpose (PLATE II, *upper*).

For comparison with these the lower figure in the same plate shows two polished triangular pebbles that were found with Iron Age pottery near Horsted Keynes, Sussex.² This pottery, which is attributable to

¹ ANTIQUITY, 1940, XIV, 150.

² *Sussex Arch. Coll.*, 1937, LXXVIII, 253-65.

PLATE I



IMPRESSIONS OF GRAIN ON BASE OF POT OF IRON AGE A
(Brighton Museum)

Above : The pot-base from below, showing impressions

Below : Wax squeeze (positive), naturalistically coloured
Ph. E.C.C.

PLATE II



BURNISHING-STONES FOR POTTERY

Above : Modern Danish from West Jutland, used for burnishing hand-made black pottery

Ph. from Axel Steensberg

Below : Polished triangular pebbles from Southeastern ' B ' pottery-site near
Horsted Keynes, Sussex

Ph. E.C.C.

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the early first century A.D., was found by Mr H. R. Hardy in considerable quantities in a length of ditch that had been cut into clay that is now being dug for brick-making. The predominant features are those of the so-called 'South-eastern B' ware, viz., eye-brow or swag decoration, impressed circles, omphalos bases, and out-curling lip above high-swelling shoulder or low-swelling belly; some Belgic influence is also traceable. Some of the vessels have been coloured with haematite, and some have the eye-brow decoration reinforced with black paint. Although actual kilns have not yet been identified, there seems good reason for regarding the site as that of a potter's workshop. None of the vessels showed any sign of having been used for cooking food, as is usually the case in Iron Age habitation sites; in fact, a considerable proportion of them are only partially baked. Occasional lumps of clay, vitrified on one side, may be fragments of kilns, and at least one piece of impure haematite was found, embedded in a lump of local concretionary ironstone.

It seems most probable, therefore, that the polished triangular pebbles from this site may have been used for burnishing the vessels during manufacture, and, if so, their similarity to their modern Danish counterparts is striking.

E.C.C.

Subscriptions, 1941

In view of loss of mails at sea it is possible that some payments for 1941 have failed to reach ANTIQUITY. Reminders were posted in April. Unless acknowledgments have been received (which in their turn may be lost) it can be taken that the subscription has not arrived, and a duplicate remittance will be appreciated. Any subscriber who has not had the March number should notify this at once to 24 Parkend Road, Gloucester.

To our subscribers in the British Isles who have not yet sent their subscription may we say that an immediate payment will be a great convenience.

Reviews

PREHISTORIC ENGLAND. By GRAHAME CLARK. *B. T. Batsford*, 1940. *pp.* 120 and 110 *photographs ; map and drawings.* 8s 6d.

If the present war has put a temporary stop to archaeological research, it has given an opportunity for stock-taking—a periodical necessity which is apt to be crowded out by the normal peace-time work of collecting facts. While, therefore, the spade is temporarily diverted to the uses of war, it is fitting that the mass of archaeological detail that it has disclosed in recent years should now be sifted, sorted and assembled. This will not only make it easier to appreciate the results of research up to date, but it will indicate the directions in which future investigations may most usefully be made.

Two of our foremost prehistorians have now given us two quite different syntheses of British archaeology—one for archaeologists and one for the general public. Each approaches the subject from an entirely different angle ; each is admirable and most welcome.

The excavations which provide us with most of our data are largely financed by public subscription, which in turn is dependent on public interest. The public therefore have a right to know what we have learnt through their subscriptions, and if we want them to subscribe again we must foster their interest. It is strange that this self-evident truth seems to have been so seldom realized by archaeologists, with the result that popular conceptions of our Prehistory are too often based on the writings of people who are noted for their descriptive powers rather than for accurate knowledge.

Dr Clark combines authority with an easy and lucid style. After an introductory chapter in which he sketches in outline the whole course of our Prehistory—no small achievement in itself—the succeeding chapters are devoted to a consideration of the various important aspects of man's life, each being looked at from a developmental rather than a purely chronological standpoint. These include the food quest, dwellings, handicrafts, mining and trade, communications, hill-forts, burials, and sacred sites. This rather novel method of approach has its advantages, and the collation of related facts which it entails introduces some refreshing and stimulating ideas. As the author himself claims, he writes ' of ancient remains . . . in terms of the human beings who built and used them '. This assuredly is the key to the popular interest in our prehistory, for ' deep calleth unto deep ', and in the last resort it is not things but people that appeal to us all most strongly.

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The immense amount of detail adduced by Dr Clark is truly astonishing ; one only hopes it may not prove a little embarrassing to the general reader, for it would be difficult to find a single site of importance in England and Wales that is not mentioned. This has necessitated a certain amount of conciseness in some places where rather more explanation might have been welcome. Will the general reader, for instance, make anything of dating ' on pollen-analytical evidence ' (p. 76) without some further enlightenment ? Even he, however, will feel a momentary quiver of surprise when he reads on p. 64 of ' the discovery of a lead pig inscribed " Claudius 49 A.D." ' !

The publishers are to be congratulated on their enterprise in including this work in their ' British Heritage Series ', lavishly illustrated, and yet sold at such a modest price. The 110 photographs are well-chosen, clearly reproduced and not spoilt by over-reduction. They include several magnificent aerial views by the late Major G. W. G. Allen. Archaeologists will enjoy this book no less than the general public.

E. CECIL CURWEN.

PREHISTORIC COMMUNITIES OF THE BRITISH ISLES. By V. GORDON CHILDE. *W. and R. Chambers*, 1940. pp. 274, 16 plates, 96 figures. 20s.

It would be difficult to exaggerate the sense of satisfaction derived from the study of Professor Childe's *Prehistoric Communities of the British Isles*. It is a book that demands and repays repeated reading. Nothing along these lines has yet appeared, for not only does it cover the whole of the British Isles (instead of the arbitrary fragment of Britain known as England and Wales), but it deals with all the known ' societies ' in their mutual relations, both cultural, chronological, and especially economic. The condensation of so vast a theme into so readable a book is due to the author's happy facility for picking out salient facts and cogent arguments, avoiding the errors of assuming too much previous knowledge on the part of the reader on the one hand, and of over-description on the other.

Under the author's treatment one is enabled to watch the various peoples of the British Isles in their reactions and interactions down the centuries, like a seething cauldron ; moreover the chaos of the cauldron is reduced to the orderliness of a cinematographic distribution-map (if such a thing were possible). In order to do this he takes as his basis the succession of food-producing cultures of the lowland zone of England, from the Windmill Hill folk down to the Belgae, and numbers them as periods (Periods I to IX). Not only does he sketch the probable origin and salient features of each, but he attempts to show the results of their impact on their predecessors or on neighbouring ' societies '. Thus he argues very convincingly that the impact of the Windmill Hill neolithic farmers on the mesolithic aborigines, themselves part of the North European

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Forest population, produced the Peterborough and Skara Brae cultures ; further that the influence of the beaker folk upon the Peterborough people produced the food-vessel societies, while that of Skara Brae on the collared urn produced the encrusted urn. The synthesis is in many ways bold and original, but it is supported by evidence for which chapter and verse is given.

The present reviewer, for one, is grateful for the comprehensive account of the spread of the ' megalithic religion ', which is likened in its material effects to the spread of other religions such as Christianity. Different ' sects ' built different varieties of burial chamber or family vault, the characteristics and distribution of which—so confusing to the uninitiated reader of excavation reports—are comprehensively set forth and explained. The economic basis of this, as well as of other movements and cultures, is also examined, and its repercussions on other societies on both sides of the Irish Sea.

The factor of the time-lag in the highland zone and in Ireland is also taken into account, and evidence is cited suggesting that food-vessels may have survived in Ireland down to the southern English Late Bronze Age ; that the heirs of the Middle Bronze Age urn-folk can be distinguished in Limerick as late as the beginning of our era ; that iron was not introduced into Scotland before 200 B.C., and, into many parts, not till much later ; and finally that in the Hebrides bone bobbins of Iron Age B type (not to mention other Iron Age features) survived down to within the last hundred years.

Enough has been said to indicate the stimulating character of the book. It is a synthesis, and as such it is bound to be largely tentative, and subject to correction as a result of future discoveries. One of its main advantages will be that by clarifying and systematizing our knowledge up to date, it will indicate the directions in which future research will be most useful after the war. It is not to be expected that all will agree with everything that is said. It is not true, for instance, to say that ' on each block of Sussex Downland there is a causewayed camp, a group of flint-mines and a cluster of long barrows ' (p. 40). The actual distribution suggests two tribal groups, with the detribalization of the flint-miners—possibly an important economic point. The distributions of the two regional varieties of ' western ' neolithic pottery (p. 44) are so difficult to visualize from their description, and yet apparently so significant, that many headaches would have been saved by the help of a map. The following words do not present a convincing argument (p. 163) : ' Perhaps metal-workers formed a class apart, . . . Metallurgists must, then, be treated as a distinct society '. The words I have omitted adduce no reason for the ' must ', but only qualify and explain the ' class apart '. The possible detribalization of bronze-smiths may nevertheless be noted in connexion with that of the flint-miners just mentioned.

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The author argues (pp. 176-8) that the features distinguishing Late Bronze Age I in southern England are not due to ethnic immigration so much as to an influx of (detribalized?) Continental bronze-smiths (or should we call them 'technicians' nowadays, preceding the army of occupation?); also that Deverel-Rimbury pottery is not earlier than Late Bronze Age II. The evidence is admittedly slender as yet, but at Park Brow and Plumpton Plain (site A) we have two settlements belonging to phase I; the former yielded Deverel-Rimbury pottery, and the latter belonged to immigrant farmers who introduced the Celtic field-system. The culture of the Deverel-Rimbury folk was not really replaced or even absorbed by the Iron Age A invaders in southern England (p. 194). If one may judge from the ceramic record, which is particularly clear in Sussex, the resulting fusion might more accurately be termed an absorption of the Iron Age A folk by the Deverel-Rimbury population.

The great hill-forts of the Iron Age appear to the author to have been camps of refuge which may also have been used as walled farms (surely an incongruous, if not actually incompatible, association!) rather than embryonic 'cities'. The question of area is no argument, for almost all our permanently occupied hill-forts are larger than the 'cities' of Palestine and the Near East (Jericho, Lachish, Troy) which presumably formed the ultimate prototype. Their permanent occupation is attested by the presence of silos, or grain-storage pits, as well as considerable quantities of domestic refuse. Silos would not be needed in camps of refuge, occupied occasionally in an emergency. The Trundle (Sussex) has a fair number of silos and other evidence of occupation, but there are no traces of lynchets on the virgin downland that surrounds the site; the inference, therefore, is that the occupants kept corn, but did not grow it themselves. This argues industry and barter. The bleakness of the hill-top situation is no argument either, as most of the villages were similarly placed; and it is not true to say that the evidences of occupation are generally concentrated under the shelter of the ramparts (pp. 198 ff.). The La Tène invaders (Iron Age B) who possessed a 'half-urban economy' derived partly from the urban civilizations of Magna Grecia and Etruria (p. 212), were mainly responsible for the development of our large hill-forts. Though the ramparts may have been constructed by the A folk against the invading B folk, yet the population that subsequently occupied the sites was a blend of A with B, and it is surely quite natural to see here a proof of their 'half-urban economy' in occupying 'cities' in imitation of Mediterranean peoples, even though these 'cities' do not entirely correspond with those of a fully urbanized society.

The book closes with a brief discussion of two problems which are intermittently a source of worry and speculation, namely, the identification of the Goidels and the Picts, respectively, in the archaeological record. Archaeologists

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are shy of these problems, probably because they involve other factors, such as linguistics, with which they do not feel entirely at home. It is true that comparative philology has been deprived of much of its potential charm by the heavy handling it has received from German professors, but it is a subject which, used with discretion, could be a most valuable handmaid to archaeology. In regard to the identity of the people who first introduced the Goidelic form of Celtic speech to the British Isles the author examines the claims of the possible candidates, and, while admitting that no solution of the problem is yet possible, feels that the archaeological evidence excludes every known candidate except the Beaker folk and their successors, the Urn folk. To the reviewer the linguistic aspect of this problem makes such an identification very difficult to accept, and he believes that when the solution to the problem has eventually been found, the arrival of the Goidels will be found to have taken place not earlier than the Late Bronze Age. The Picts, too, are surely the residual contents of the melting-pot into which all the earlier immigrants into Scotland gravitated.

The book is adequately illustrated and provided with full bibliography and index. The footnote references on each page are welcome, being so much handier than tiresome references to a bibliography at the end of the volume.

E. CECIL CURWEN.

MUSÉES ROYAUX D'ART ET D'HISTOIRE À BRUXELLES :
BELGIQUE ANCIENNE. Catalogue descriptif et raisonné par le Baron
[A]. DE LOË, conservateur honoraire. IV : La période franque. *Bruxelles* :
Vromant & Co., 1939. pp. 218 with 168 illustrations. 80 francs (16 belgas).

This excellent catalogue of remains of ancient Belgium in the Brussels Royal Museum of Art and History was written by one of the best students and connoisseurs of Belgian antiquities, a large part of which he had collected himself. He wrote this summary of his scientific work after he had retired in 1925 from his office at the Museum. The first part, referring to the Stone Ages, published in 1928, is known to the readers of *ANTIQUITY* from the review in vol. IV, 137 ; a second part (1931) was devoted to the Bronze and Iron Ages ; a third (1937) to the Roman period of Belgium, and the present volume brings the work to a successful conclusion. It is, as a former reviewer has said, a real manual of Belgian archaeology. The nucleus of the volume (pp. 47-190) is the short but impressive catalogue of antiquities exhibited in room IV of the Museum and in a show-case of room III. Their arrangement gives the sequence of the descriptions. The obvious advantage is that objects found together are generally described together, so that, for example, the contents of the separate cemeteries, e.g. that of Anderlecht, can in this way be surveyed as unities, the more as the original situation of the finds (in relation to a Roman road, etc.)

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and the circumstances of the discovery are indicated in brief. The literature relative to them is mentioned, and many illustrations help the reader who is unable to visit the Museum. A general introduction (pp. 7-46) sketches the historical background of the Frankish period, and gives a comprehensive survey of the objects mentioned in the catalogue.

There may be some doubts as to the extent of the territory attributed to the Riparian Franks (p. 9). The names of Odin and Thor should not be used (p. 11) for Woden and Donar, except as to the Scandinavian branches of the Germanic peoples. The controversies on the settlement of the Franks started by the work of Petri (1937) might have been mentioned, and I miss also (p. 37, n. 1, and p. 138, n. 1) the important article of Ernest Babelon on the tomb of King Childeric discovered at Tournai in 1653 (*Le tombeau du roi Childéric et les origines de l'orfèvrerie cloisonnée*, in *Mémoires de la Société nationale des Antiquaires de France*, 1924, LXXVI, 1-112). In connexion with the spur of Lava-cherie (p. 110, n. 1) a mention of the dissertation of H. v. Mangoldt-Gaudlitz might have been useful also (*Die Reiterei in den germanischen und fränkischen Heeren bis zum Ausgang der deutschen Karolinger*, 1922). The opinion that the Frankish kings did not revisit the same royal villa until three years had passed (p. 17), is refuted by a glance at the few existing charters of the Merovingians, or at Mühlbacher's *Regesta* of the Carolingian dynasty. The hoard of Muysen lez-Malines, the coins of which do not go beyond the year 877, may rather point to the presence of the 'great army' of the Vikings from 879 onwards than to the later battle of Louvain in 891 (p. 150), if there exists any connexion with the invasions of the Northmen at all. The life of Bishop John of Théroutanne (p. 177), a new edition of which has been made by O. Holder-Egger in vol. xv, 2, of the *Scriptores* of the *Mon. Germ. hist.*, is attributed today to Archdeacon Walter, not to John de Colmieu. But these trifles are 'Schönheitsfehler' which may disappear in a second edition of this useful work, which I hope will be required in more peaceful times. The volume ends with a general index of this part, and with a list of the illustrations of the four volumes. W. LEVISON.

EXCAVATIONS AT OLYNTHUS. Part VIII. The Hellenic house: a study of the houses found at Olynthus with a detailed account of those excavated in 1931 and 1934. By DAVID M. ROBINSON and J. WALTER GRAHAM. Baltimore: Johns Hopkins Press; London, Humphrey Milford, Oxford University Press, 1938. pp. XXI, 370, 36 text-figures and 110 plates. £3 7s 6d.

This volume forms part VIII of the series describing the excavations at Olynthus which have been conducted at intervals since 1928 by the Johns Hopkins University Expedition under the direction of Dr D. M. Robinson. It

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contains a detailed description of the houses excavated in 1931 and 1934, those excavated in 1928 having been already published ; but it also contains an analytic study of the classic Greek house for which Olynthus provides unique material, the houses on the North Hill being securely dated to the last quarter of the fifth century and the first half of the fourth.

The historical and archaeological evidence for this dating is reviewed in the Introduction. This is followed by a description of the lay-out of the city, and an estimate of its population, which is calculated as having been, at the time of the destruction, about twelve to fifteen thousand. In the last chapter of part I the two standards of length in use are discussed and it is suggested that the reason why the Attic-Eubœic foot was gradually supplanted by the Attic-Aeginetan was perhaps ' the close commercial relations between Athens and Olynthus '.

Part II contains a detailed description of individual houses, beginning with the Villa of Good Fortune and the House of the Comedian (the mosaics have been previously published). In part III the houses are considered with reference to their planning, in part IV with reference to their construction ; in part V with reference to their equipment ; and all with reference to comparative material elsewhere.

The description is accompanied by occurrence-tables of important features and followed by an appendix of objects found in the houses, a general index, an index to Greek words and finally a concordance between plates and text.

Every house of importance is illustrated by a plan and at least one photograph. Objects too are fully illustrated.

The standard of plans and photography is high ; proof-reading has been exact. Insignificant omissions noted are the numbering of the fragmentary houses A-i, 9-10 on plate 109, and the compass-bearing on plate 91. It would have been a convenience if the page reference had been given when figures are referred to ; and if some of the illustrations of the finer mosaics from earlier publications could have been repeated.

The special value of the Olynthus excavations lies, of course, in the fact that the finds can be placed within established chronological limits, and thus provide a canon for various aspects of one phase of Hellenic civilization.

Each volume as it appears extends the range of knowledge to a fresh class of remains. By the publication of the present volume, houses and domestic equipment have now been added and the picture is steadily being completed. The faithful and objective recording reflects the methodical conduct of the expedition which is fortunate in having enjoyed the continuous direction of one man, both in the field and in the publication of the finds. W. A. HEURTLEY.

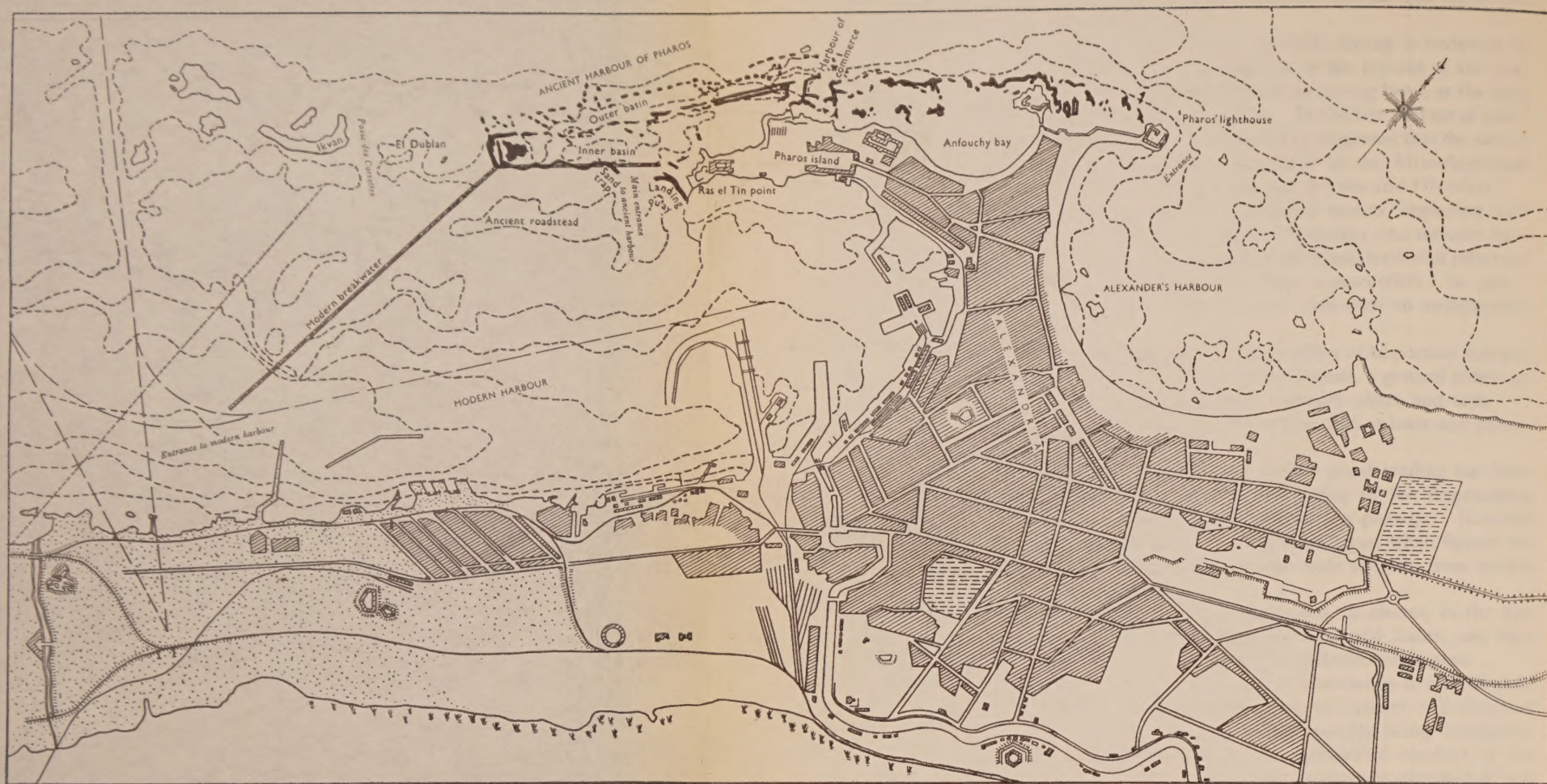


FIG. 1. ALEXANDRIA, SHOWING THE ANCIENT HARBOUR OF PHAROS, ALEXANDER'S HARBOUR, AND THE MODERN HARBOUR